

Additional Site Investigation

Hurricane Road Industrial Development / Former Houghland Tomato Cannery

1130 East Eastview Drive

Franklin, Indiana

IDEM Site Identification Number 2013-34567

Patriot Project No.: 17-0995-01E

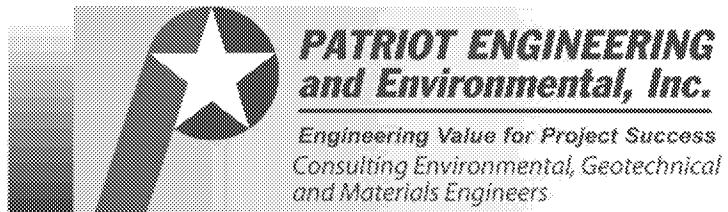
Prepared For:

Indiana Department of Environmental Management
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Prepared By:

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October 19, 2017



October 19, 2017

Hurricane Road Industrial Development, LLC
 c/o Mr. Greg Cafouros
 Kroger, Gardis & Regas, LLP
 111 Monument Circle, Suite 900
 Indianapolis, Indiana 46204

RE: Additional Site Investigation
Hurricane Road Industrial Development /
Former Houghland Tomato Cannery
1130 East Eastview Drive
Franklin, Indiana
IDEM Site Identification Number 2013-34567
Patriot Project No.: 17-0995-01E

Dear Mr. Cafouros,

Patriot Engineering and Environmental, Inc. (*Patriot*) is pleased to submit this DRAFT report for the Additional Site Investigation (ASI) performed at the above-referenced Site. The ASI was conducted in response to a directive from the Indiana Department of Environmental Management (IDEM) that further investigation of the Hurricane Road Industrial Development (HRID) property and the adjacent Reed Manufacturing property be conducted currently. This report details the activities performed by *Patriot* on the HRID property, and summarizes the activities performed by Ramboll Environ US Corporation on the Reed Manufacturing property.

If you have any questions or comments regarding this report, please do not hesitate to contact Mike Casper at (317) 576-8058 or mcasper@patrioteng.com.

Respectfully submitted,

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**ADDITIONAL SITE INVESTIGATION
HURRICANE ROAD INDUSTRIAL DEVELOPMENT /
FORMER HOUGHLAND TOMATO CANNERY
1130 E. EASTVIEW DRIVE
FRANKLIN, INDIANA
IDEM SITE IDENTIFICATION NUMBER 2013-34567
PATRIOT PROJECT NUMBER 17-0995-01E**

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1.0 INTRODUCTION

Patriot Engineering and Environmental, Inc. (*Patriot*) was retained by Kroger, Gardis & Regas, LLP on behalf of Hurricane Road Industrial Development, LLC (HRID) to conduct an Additional Site Investigation (ASI) of the HRID property located at 1130 East Eastview Drive in Franklin, Indiana (henceforth referred to as the Site). The location of the Site is depicted on the Site Location Map included as Figure 1 in Appendix A, while the layout of the Site is depicted on the Site Map included as Figure 2 in Appendix A. The ASI was conducted in response to a Further Site Investigation Review letter from the Indiana Department of Environmental Management (IDEM) dated April 4, 2017 requiring further investigation of soil and groundwater conditions on the Site and on the adjacent RCO-Reed Corporation d/b/a Reed Manufacturing Services (Reed) property, both of which make up the Former Houghland Tomato Cannery (Houghland) property as described below. This report documents the activities conducted during the ASI and presents our findings and conclusions relative to the Site.

2.0 SITE BACKGROUND

2.1 Site Description

The Site is a portion of the former Houghland property, a former tomato canning operation, that was subsequently divided into two properties. Mr. Robert Clawson, doing business as HRID, owns the eastern portion of the former Houghland property at 1130 E. Eastview Drive (IDEM Site Identification Number 2013-34567). Mr. Clawson leases the buildings on the property to various commercial tenants. Reed owns and occupies the western portion of the former Houghland property at 1056 E. Eastview Drive (IDEM Site Identification Number 2013-42015). *Patriot* had previously conducted environmental investigations at the Site, while Ramboll Environ US Corporation (Ramboll Environ) had previously conducted environmental investigations on the Reed property.

2.2 Chemicals of Concern

Investigations that have been performed at the Site and on the Reed property have revealed the presence of volatile organic compounds (VOCs) in soil and groundwater on both properties. The chemicals of concern (COCs) present at the properties are primarily the VOCs tetrachloroethene (PCE) and trichloroethene (TCE), with lesser amounts of cis-1,2-dichloroethene (cis-1,2-DCE). The COC impacts on the two properties appear to be interrelated, although an actual source area or areas has not been identified.

2.3 Additional Site Investigation Background

Patriot has conducted several investigations at the Site, including a Further Site Investigation (FSI) in August and September 2016 (Patriot Project Number 16-1158-01E). The final FSI report was issued to IDEM on January 10, 2017. The IDEM reviewed the FSI report, as well as an FSI report for the adjacent Reed property prepared by Ramboll Environ, and issued its Further Site Investigation Review Letter. The letter stated that "Both property owners must continue to work together to determine the origin of the cVOC contamination near the property line", and provided specific comments regarding each property. IDEM's comments for the HRID property are provided below, followed by a summary of the activities conducted by Patriot during this ASI to address the comment.

IDEML Comment #1: The highest concentrations of chlorinated volatile organic compounds (cVOCs) in the shallow soil were identified in the sparsely wooded area that straddles the two properties south of the two facilities. The highest cVOC concentrations in shallow soils were identified in boring EBH-12 within the wooded area on the Reed property. The highest concentration of tetrachloroethylene (PCE) in the deeper soil samples was reported in soil boring PB-27, downgradient and in close proximity to the wooded area. IDEM agrees with the conclusion that additional investigation is needed to determine the source of contamination and if it is from the wooded area.

Patriot and Ramboll Environ concurrently performed soil sampling and analysis in and adjacent to the wooded area along the common boundary between the two properties. (See Section 3.2)

IDEML Comment #2: CVOC contamination is not delineated to the east. Additional monitoring wells are needed down gradient of monitoring well MW-12, MW-22, and MW29.

Existing monitoring wells MW-14 and MW-15 are located down gradient of monitoring wells MW-12, MW-22 and MW-29, but were not sampled during the FSI because they are located in a heavily wooded area and dense vegetation growth prevented access to locate and sample the wells. (see response to IDEM Comment #3). Monitoring wells MW-14 and MW-15 were located and sampled during this ASI, fulfilling IDEM's requirement for down gradient sampling. (See Section 3.4)

IDEM Comment #3: Monitoring wells MW-14 and MW-15 down gradient of the property line must be sampled during all future sampling events.

As stated above, monitoring wells MW-14 and MW-15, as well as monitoring wells MW-16, MW-17 and MW-28, are located in a heavily wooded area where dense vegetation growth prevented access to locate and sample the wells. During this ASI, the vegetation was cleared, and monitoring wells MW-14, MW-15, MW-16, and MW-28 were accessed and sampled during this ASI. (See Section 3.4)

IDEM Comment #4: Vapor intrusion (VI) sampling revealed trichloroethylene (TCE) exceeding the Commercial Sub-Slab Screening Level (CSSSL) and the Commercial Indoor Air Action Level (CIAAL) at the Crossroads Recycling building. IDEM concurs that additional action at the Crossroads building is warranted. VI investigations must take place at the tenant spaces in the Crossroads building. Due to concentrations of TCE in monitoring wells MW-12, MW-22, and MW-29, VI investigations must take place at all remaining on-Site buildings at the Hurricane Road Industrial Development because they are within 100 feet of the aforementioned monitoring wells.

The methodologies and findings of the vapor intrusion (VI) investigation will be provided to IDEM under separate cover.

IDEM Comment #5: Vertical ground water profiling remains undefined on-site and must be delineated. Additional monitoring wells are needed on both properties for this purpose.

Patriot installed two deeper groundwater monitoring wells on the Site (MW-31 and MW-32) to conduct vertical groundwater profiling. (See Section 3.3) Ramboll Environ also installed one groundwater monitoring well (EMW-1D) on the Reed property for the same purpose.

Following receipt of the IDEM's letter, *Patriot* and Ramboll Environ collaborated to develop and implement a scope of work to address IDEM's directives.

3.0 ADDITIONAL SITE INVESTIGATION ACTIVITIES

3.1 Clearing of overgrowth and debris

The investigative borings were advanced in an area along the Reed/HRID property boundary that was overgrown and contained a significant amount of concrete, rocks, logs, and other debris. *Patriot* and Ramboll Environ jointly retained an environmental excavating firm to clear the debris and overgrowth to allow access for the soil sampling equipment.

As previously stated, monitoring wells MW-14, MW-15, MW-16, MW-17, and MW-28 are located in a heavily wooded area along the eastern half of the HRID property. Access to the wells had been cleared when the wells were installed, but overgrowth of the wooded area over time had resulted in these wells being inaccessible. *Patriot* utilized the environmental excavation subcontractor to reopen access to these wells for sampling.

3.2 Soil Investigation

Patriot mobilized to the Site on August 16 and 17, 2017 to advance six soil borings on the Site (PB34 through PB-39) in or near the wooded area on the common boundary with Reed. *Patriot* also provided oversight as Ramboll Environ concurrently advanced five borings (EB29 through EB33) on the adjoining Reed property in or near the wooded area along the common boundary. Ramboll also collected a soil sample for laboratory analysis from the boring for deeper monitoring well EMW-1D located east of the wooded area. The *Patriot* and Ramboll Environ boring locations are shown on the Soil Boring Location Map provided as Figure 3 in Appendix A. The area under investigation in this ASI included a densely-wooded area that extends onto both properties and contains miscellaneous fill material and debris. A semi-circular concrete structure that was reportedly used by Houghland to contain residual vegetable material from the canning operations for use as cattle feed is located on the southern edge of the wooded area on the Reed property. The wooded area and concrete structure are shown on Figure 2 and Figure 3.

Prior to the previous subsurface investigation activities, the property boundary between the Site and the Reed property was marked by a licensed surveyor to assist in accurately locating the boring locations in the field. Public underground utilities on both properties were located and marked by Indiana Underground Plant Protection Services. Bloodhound Underground was also retained to locate and mark any underground

utilities or structures in the investigation area using ground penetrating radar and electromagnetic imaging.

Six soil borings were advanced on the Site to a depth of approximately 20 feet below ground surface (bgs) using a Geoprobe® direct push sampling rig equipped with dual core samplers. All sampling was performed in accordance with standard United States Environmental Protection Agency (U.S. EPA) and IDEM protocols for environmental investigations. All equipment coming into contact with the samples designated for analysis was decontaminated before and during use. Decontamination of sampling equipment involved cleaning with non-phosphate detergent wash and distilled water rinses.

Soil samples from the Geoprobe® borings were obtained using a 2-inch diameter, stainless steel, dual core barrel sampler equipped with an acetate liner. Soil samples were collected by hydraulically pushing the sampler to the desired depth. The sampler was then recovered with a continuous soil sample within the acetate liner inside the barrel. A new acetate liner was used for each sample collection. Subsequent samples were collected by advancing the sampler to the deeper target zone.

Following collection, the lithology of each soil sample was visually classified in accordance with the Unified Soil Classification System and field screened for odor, staining, and the presence of volatile organic vapors using headspace analysis. The field screening procedure is typically used to qualitatively determine if petroleum products or volatile organic compounds (VOCs) are present in the soil samples. Headspace analysis was conducted by placing a portion of the sample in a sealed zip-lock plastic bag and allowing the sample to equilibrate for approximately 5 minutes. A Mini-Rae photoionization detector (PID) organic vapor analyzer was used to measure the concentration of total photoionizable vapors (TPVs) emitted from the sample. The soil lithology and field screening results were recorded on soil boring logs, which are included as Appendix B.

One soil sample was collected for laboratory analysis from the upper 2 feet of each boring. On the basis of odor, staining, TPV response, and professional judgement, one additional soil sample was collected from each soil boring at the depth interval determined most likely to contain COC impacts. Samples selected for laboratory analysis were collected using laboratory-supplied Method 5035 Terracore sampling kits. The soil samples were labeled, placed on ice in a cooler, and delivered to Pace Analytical Services, Inc. (Pace), in Indianapolis, Indiana, using chain-of-custody controls. Soil samples were analyzed for VOCs using U.S. EPA SW-846 Method 8260.

Quality assurance/quality control (QA/QC) procedures included the collection and analysis of a duplicate sample (PB-35 13-15), a matrix spike/matrix spike duplicate (MS/MSD) sample (PB-39 3-5), and a trip blank. After completion, the soil borings were backfilled with bentonite. All investigation-derived waste was placed in 55-gallon steel drums and stored on-Site pending disposal.

3.3 Vertical Groundwater Profiling

3.3.1 Groundwater Grab Sampling

Patriot advanced two deeper soil borings on the Site (PB40 and PB41) to collect groundwater samples for vertical contaminant profiling. Boring PB-40 was advanced adjacent to monitoring well MW-30, where the highest concentrations of groundwater COCs have previously been reported. Boring PB-41 was advanced adjacent to monitoring well MW-26, immediately south of the main site building. Boring PB-40 was advanced to a depth of 35 feet bgs where refusal was encountered and boring PB-41 was advanced to a depth of 38 feet bgs where refusal was encountered. Boring logs for borings PB40 and PB41 are included in Appendix B. When the maximum depth of each boring was reached, a groundwater grab sample was collected using dedicated plastic tubing with a bottom check valve. The Geoprobe® tooling was then withdrawn approximately one-third of the distance between the bottom of the boring and the top of the water table, where another groundwater grab sample was collected using the same methodology. The Geoprobe® tooling was then further withdrawn to another one-third of the distance between the bottom of the boring and the top of the water table, where a third groundwater grab sample was collected. Groundwater samples were collected from boring PB40 at depths of 29 to 33 feet bgs, 15 to 19 feet bgs, and 6 to 10 feet bgs. Groundwater samples were collected from boring PB41 at depths of 30 to 34 feet bgs, 24 to 28 feet bgs, and 15 to 20 feet bgs.

The groundwater samples were placed in appropriate sample containers, labeled, placed on ice in a cooler, and delivered to Pace using chain-of-custody controls. The six groundwater samples, along with one duplicate sample, one MS/MSD sample, and one trip blank were analyzed for VOCs by U.S. EPA SW-846 Method 8260.

Upon completion of sampling, the borings were backfilled to grade using bentonite chips.

3.3.2 Installation of Groundwater Monitoring Wells

Patriot evaluated the analytical results for the groundwater grab samples to determine the appropriate depth to install groundwater monitoring wells. At both boring locations,

the grab sample analysis indicated that the COC concentrations decreased with depth, and there was no evidence of dense, not-aqueous phase liquid (DNAPL). Groundwater monitoring well MW-31 was installed to a depth of 30 feet bgs adjacent to soil boring PB-40 and monitoring well MW-32 was installed to a depth of 33 feet bgs adjacent to soil boring PB-41. A hollow-stem auger drilling rig was used to advance each boring to the desired depth. The monitoring well was constructed of a 5-foot long section of 2-inch diameter, 0.010 inch slotted polyvinyl chloride (PVC) screen and a sufficient length of 2-inch diameter PVC riser to reach the ground surface. A sand pack was placed around the well screen to a depth of approximately one 1 foot above the well screen. A 1-foot thick bentonite seal was placed above the sand pack, and the remaining annular space was filled with bentonite chips to approximately 1-foot bgs. The well was then completed flush with the ground surface with a lockable expansion-type cap and an 8-inch diameter, steel, flush-mount protective cover set in a concrete pad. The groundwater monitoring well diagrams for MW-31 and MW-32 are included in Appendix B, and their locations are depicted on Figures 2 and 3.

3.4 Monitoring Well Sampling

Patriot mobilized to the Site on August 21-22, 2017 to conduct groundwater sampling from select monitoring wells at the Site. Four of the 23 monitoring wells were not sampled during this ASI, including: MW-17, which is located at the far northeastern corner of the property beyond wells MW-16 and MW-28 that have never shown groundwater impacts; MW-18 and MW-19, which are located upgradient of both the Site and the Reed property; and MW-25, which is located between two buildings on the northwestern portion of the Site and was covered with equipment and materials. The remaining 17 monitoring wells were sampled using low-flow purging and sampling techniques. The well depths and screened intervals are provided on Table 1 in Appendix C and the monitoring well locations are shown on Figure 2.

Prior to sampling, each of the monitoring wells was gauged using an electronic water level meter. The depth to groundwater and total well depth from the surveyed top of casing was measured to the nearest 0.01 foot at each well. The water level probe and tape were decontaminated with a non-phosphate detergent wash and distilled water rinses after use at each well to prevent cross contamination. The depth to groundwater measurements and corresponding groundwater elevations for the ASI and previous gauging events are provided in Table 2 in Appendix C. A groundwater potentiometric surface map developed from the groundwater elevations is provided as Figure 4 in Appendix A.

The groundwater monitoring wells were sampled in accordance with the low-flow sampling method outlined in the IDEM Micro-Purge Sampling Option Technical Guidance Document (TGD) (June 3, 1998, revised November 3, 2009). The low-flow sampling was conducted using a submersible pump to purge and sample the monitoring wells at low flow rates of 50-200 milliliters per minute (ml/min). During the low-flow purging, a multi parameter water quality probe (Horiba Model U22) with a flow-through cell was used to measure pH, conductivity, turbidity, dissolved oxygen (DO), temperature, total dissolved solids (TDS), and oxidation-reduction potential (ORP). Groundwater samples were collected once the parameter values stabilized in accordance with the criteria stated in the IDEM technical guidance document. The data collected during the sampling activities were recorded on groundwater sampling field data forms, which are provided in Appendix D.

The ground water samples were collected in new laboratory-supplied 40 milliliter amber glass vials with Teflon-lined caps preserved with hydrochloric acid. The sample containers were labeled, placed on ice in a cooler, and delivered to Pace using chain-of-custody controls. Groundwater samples were analyzed for VOCs using U.S. EPA SW-846 Method 8260. QA/QC procedures included the collection and analysis of one duplicate groundwater sample at MW-23 and one trip blank. The laboratory results were reported with Level IV DQO.

The pump was decontaminated after use at each well with non-phosphate detergent wash followed by a triple distilled-water rinse. New disposable polyethylene tubing was used at each well location. All monitoring well purge water and decontamination water was containerized in sealed 55-gallon drums pending disposal at an off-site licensed disposal facility.

4.0 INVESTIGATION RESULTS

4.1 Soil Results

4.1.1 Field Observations

The soils encountered during the ASI consisted primarily of brown medium stiff silt to a depth of approximately 5 to 9 feet bgs. Surficial fill material was encountered above the silt in borings PB35, PB37, PB38, PB40 and PB41 to depths ranging from 2 to 4 feet bgs. The silt was primarily underlain by well-graded sand to the depth of the borings. Groundwater was encountered under unconfined conditions at depths ranging from 5 to 16 feet bgs, with the changes in depth generally corresponding to changes in the ground surface elevation.

Field inspection of the soil samples did not reveal any odors, staining or other sensory evidence of potential COC impacts. Field PID monitoring revealed TPV readings ranging from non-detectable to less than 24 parts per million (ppm) in all of the borings.

The lithologic descriptions, field screening results, groundwater levels and soil sampling depths are provided on the boring logs in Appendix B.

4.1.2 Analytical Results

A total of 12 soil samples were collected from the six soil borings advanced at the Site and were analyzed for VOCs. The analytical results were compared to the IDEM Remediation Closure Guide (RCG) Soil Migration to Groundwater Screening Levels (MTGSLs), as well as the RCG soil Residential, Commercial/Industrial, and Excavation Direct Contact Screening Levels (DCSLs). The soil analytical results for this ASI and the previous FSI on both the Site and the adjacent Reed property are summarized on Table 3 in Appendix C and are plotted on the Soil Analytical Data Map included as Figure 5 in Appendix A. The soil analytical laboratory results and chain-of-custody forms are provided in Appendix E.

PCE and TCE were detected in four of the six shallow (0 to 2 feet) soil samples, but at concentrations that did not exceed any of the RCG Screening Levels. Deeper soil samples collected from borings PB-34 (13 to 15 feet), PB-35 (13 to 15 feet), PB-36 (8 to 10 feet), PB-37 (8 to 10 feet) and PB-38 (8 to 10 feet) exceeded the RCG MTGSLs for PCE and TCE, but did not exceed any of the DCSLs. The highest concentration of TCE in the deeper samples was 0.18 mg/kg in boring PB-34 (13-15 feet) and the highest concentration of PCE in the deeper samples was 4.2 mg/kg in boring PB-37 (8 to 10 feet).

Ramboll Environ collected 11 soil samples from the six borings on the Reed property. Four of the five shallow soil samples contained PCE and TCE above the RCG MTGSL. The highest PCE and TCE concentrations in the Reed property shallow soil samples were 5.3 mg/kg and 3.0 mg/kg, respectively, both of which were from boring EB-32. Deeper soil samples collected from all six of the Reed property borings exceeded the RCG MTGSL for PCE, but did not exceed any of the DCSLs. Deeper soil samples collected from five of the six Reed property borings exceeded the RCG MTGSL for TCE, but did not exceed any of the DCSLs. The highest PCE and TCE concentrations in the Reed property deeper soil samples were 10.1 mg/kg and 0.69 mg/kg, respectively, both of which were from boring EB 32.

4.2 Vertical Groundwater Profiling Results

Groundwater grab samples were collected at three depths from borings PB-40 and PB-41 to vertically profile the groundwater COCs prior to installing a deeper monitoring well in each boring. Groundwater samples collected from 6 to 10 feet bgs and 15 to 19 feet bgs in boring PB-40 showed no significant change in PCE and TCE concentrations. The groundwater sample collected from 29 to 33 feet bgs in boring PB-40 showed a one order of magnitude decrease from the two shallower samples. Lower permeability clay layers were present at depths of 19 to 20 feet bgs and 22 to 25 feet bgs, between the two shallower samples and the deeper sample. The clay layers appear to be acting as confining layers limiting the downward migration of COCs in this location. Groundwater samples collected at depths of 15 to 20 feet bgs, 24 to 28 feet bgs, and 30 to 34 feet bgs in boring PB-41 showed a slight decrease in PCE concentrations, from 22.5 micrograms per liter (ug/L) in the shallow sample to 18.4 ug/L in the two deeper samples. TCE concentrations dropped from 64.5 ug/l in the shallow sample to 53.4 ug/L in the intermediate sample and to 21.1 ug/L in the deep sample. No clay layers were encountered between the sample depths in boring PB-41. Gray, moist stiff clay was encountered from 26 feet bgs to the base of the boring at 35 feet bgs in boring PB-40, and from 32 feet bgs to the base of the boring at 38 feet bgs in Boring PB-41. The laboratory analytical results from the groundwater grab samples are summarized in Table 4 in Appendix C, and the analytical reports are provided in Appendix E.

As previously stated, monitoring well MW-31 was installed to a depth of 30 feet bgs adjacent to boring PB-40 and monitoring well MW-30, and monitoring well MW-32 was installed to a depth of 33 feet bgs adjacent to boring PB-41 and monitoring well MW-26. These monitoring wells were sampled during the groundwater sampling event described in Sections 3.4 above and 4.3 below. Comparison of the PCE and TCE concentrations between monitoring wells MW-30 (screened from 4.5 to 14.5 feet bgs) and MW-31 (screened from 25 to 30 feet bgs) revealed that PCE decreased from 475 ug/L to 5.7 ug/L, and TCE decreased from 253 ug/L to <5 ug/L. Comparison of the PCE and TCE concentrations between monitoring wells MW-26 (screened from 13 to 23 feet bgs) and MW-32 (screened from 28 to 33 feet bgs) revealed that PCE decreased from 21.8 ug/L to 11.0 ug/L, and TCE decreased from 48 ug/L to <26.9 ug/L. A low concentration of cis-1,2-DCE was reported in the sample from MW-31, but was not present in the sample from MW-26.

The analytical data indicate that groundwater COC concentrations decrease with depth and that no DNAPL is present in these areas.

4.3 Groundwater Monitoring Well Sampling Results

4.2.1 Groundwater Flow Data

Groundwater elevations were gauged from monitoring wells on the HRID on August 21, 2017. The results were plotted on the groundwater potentiometric surface map included as Figure 4. The groundwater flow trends in southerly direction across the norther half of the Site, and in an easterly direction across the southern half of the Site and the Reed property. The groundwater flow directions appear to be consistent with previous well gauging events.

4.2.2 Analytical Results

A total of 19 groundwater samples were collected from the Site. *Patriot* compared the groundwater analytical results to the RCG Groundwater Residential Tap Water Screening Levels (TWSLs) and the RCG residential and commercial/industrial Vapor Exposure Screening Levels (VESLs). The groundwater analytical results from the ASI and the corresponding RCG Screening Levels are summarized on Figure 6 in Appendix A, while the groundwater analytical results from the ASI and previous investigations are shown on Table 5 in Appendix C. The groundwater analytical laboratory report and chain of custody form are included in Appendix G.

PCE, TCE and cis-1,2-DCE were the only COCs detected in the groundwater samples. Cis-1,2-DCE was detected in the samples from monitoring wells MW-28 and MW-32 at concentrations of 47.7 ug/L and 19.1 ug/L, respectively; both of which are below the RCG TWSL of 70.0 ug/L. PCE exceeded the RCG TWSLs in nine of the 19 samples, the RCG Residential VESL in 4 of the samples, and the RCG Commercial/Industrial VESL in one of the samples. The highest concentration of PCE was reported in the sample from MW-30 at 475 micrograms per liter (ug/L). TCE exceeded the RCG TWSL and Residential VESL in nine of the 19 samples, and the RCG Commercial/Industrial VESL in eight of the samples. The highest concentration of TCE was also reported in the sample from MW-30 at 253 ug/L. The PCE and TCE concentrations reported for the samples collected during this ASI differed slightly from the previous groundwater sampling events, but there were no significant increases or decreases. Some of the data show a slightly downward trend in the COC concentrations, but there are not enough data to determine a statistically valid trend.

5.0 CONCLUSIONS

In response to IDEM's April 4, 2017 Further Site Investigation Review letter, *Patriot* and Ramboll Environ conducted additional investigation on the HRID and Reed properties,

which collectively make up the former Houghland property. The purpose of the additional investigation was to further evaluate the nature and extent of COC-impacts at the properties and evaluate potential source area(s) of the COCs on the properties.

The results of the soil investigation confirmed that TCE and PCE impacts are present in shallow soils and deeper soils along the common property line between the HRID and Reed properties, and that the concentrations of TCE and PCE are generally greater in the subsoils than the surface soils. The TCE and PCE impacts appear to be associated with a small wooded area that straddles the property line. Although the additional investigation revealed additional information on the nature of the TCE and PCE impacts in the soil, no obvious source of the COC impacts was identified. The highest concentrations of TCE and PCE in shallow soils detected on the Site during investigations conducted to date are 0.22 mg/kg and 0.28 mg/kg, respectively, both of which are from boring PB-24 located slightly northeast of the wooded area. The highest concentration of TCE in shallow soil on the Reed property is 3.0 mg/kg from boring EB-32, located in the wooded area just east of the semi-circular concrete structure. The highest concentrations of PCE in the shallow soil on the Reed property are 5.3 mg/kg from boring EB-32, and 7.4 mg/kg from boring EB-12, located in the wooded area east of boring EB-32 and west of the property line. The highest concentrations of TCE and PCE detected in deeper soils at the Site are 0.24 mg/kg and 7.8 mg/kg, respectively, both of which are from boring PB-27 located east of the wooded area. The highest concentrations of TCE and PCE in the deeper soils on the Reed property are 0.69 mg/kg and 10.1 mg/kg, both of which are from boring EB-32 located in the wooded area just east of the semi-circular concrete structure. Figures showing the extent and relative concentrations of TCE greater than the RCG TWSL in shallow and deeper soil are included as Figures 7 and 8, respectively, in Appendix A. Figures showing the extent and relative concentrations of PCE greater than the RCG TWSL in shallow and deeper soil are included as Figures 9 and 10, respectively, in Appendix A.

Groundwater sampling revealed that TCE and PCE exceeded the RCG TWSLs on the southern portion of the Site, with the highest concentrations near the western property boundary downgradient from the wooded area. The TCE and PCE concentrations decrease from west to east across the Site. PCE impacts are contained on the Site, but TCE is present at concentrations above the RCG Commercial/Industrial VESL at monitoring well MW-15, located near the eastern boundary of the Site. Samples from monitoring wells MW-14 and MW-16, located on the eastern property boundary south and north of MW-15, respectively, do not contain detectable COC concentrations, so it appears that the groundwater COC plume that may be leaving the site is fairly narrow. Groundwater sampling conducted on the Reed property revealed that monitoring wells

MW-5 and MW-7 are the only wells that contain both TCE and PCE at concentrations above the RCG TWSLs. Monitoring well MW-3 contains TCE at a concentration greater than the RCG TWSL. The highest concentrations of TCE and PCE on the Site during the most recent sampling event are 253 ug/L and 475 ug/L, respectively, both of which are from monitoring well MW-30 located immediately downgradient from the wooded area on the property line. The highest concentrations of TCE and PCE on the Reed property are 53.5 ug/L and 42.8 ug/L, respectively, both of which are from monitoring well MW-7 located on the Reed property's western property line just north of the wooded area.

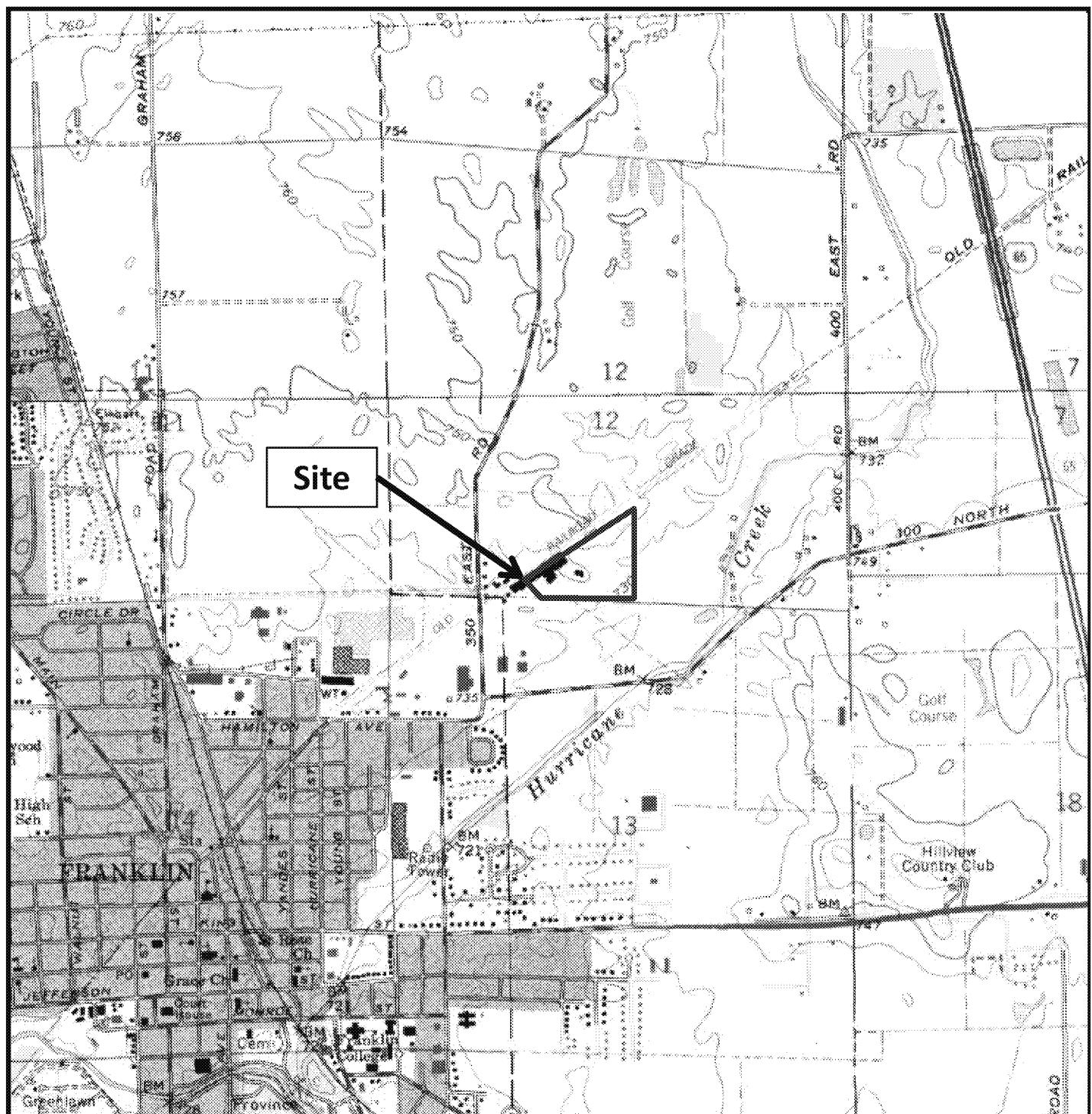
Deeper groundwater impacts at the Site appear to fairly minimal and decrease in concentration when compared to the shallower groundwater.

The investigations conducted to date have not revealed an obvious source area or areas of the soil and groundwater impacts, but the greatest soil and groundwater impacts appears to be associated with the wooded area that straddles the HRID and Reed properties. An additional monitoring well or groundwater sampling in the wooded area on the Reed property between the concrete structure and the HRID/Reed property line may provide a better understanding of groundwater impacts in and around the wooded area, and determine whether the elevated soil TCE and PCE impacts in and around borings EB-32 and EB-30 correlate to elevated groundwater TCE and/or PCE impacts in the wooded area and downgradient of the semi-circular concrete structure.

Additional source areas or preferential contaminant migration pathways may be responsible for the groundwater impacts on the northwest portion of the Site in the vicinity of monitoring well MW-24. In addition, further groundwater sampling would be necessary to define the extent of off-site impacts to the east of the HRID property.

APPENDIX A

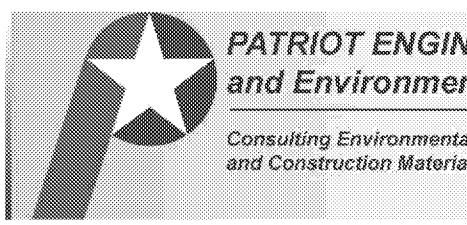
FIGURES



Site Location (approximate)



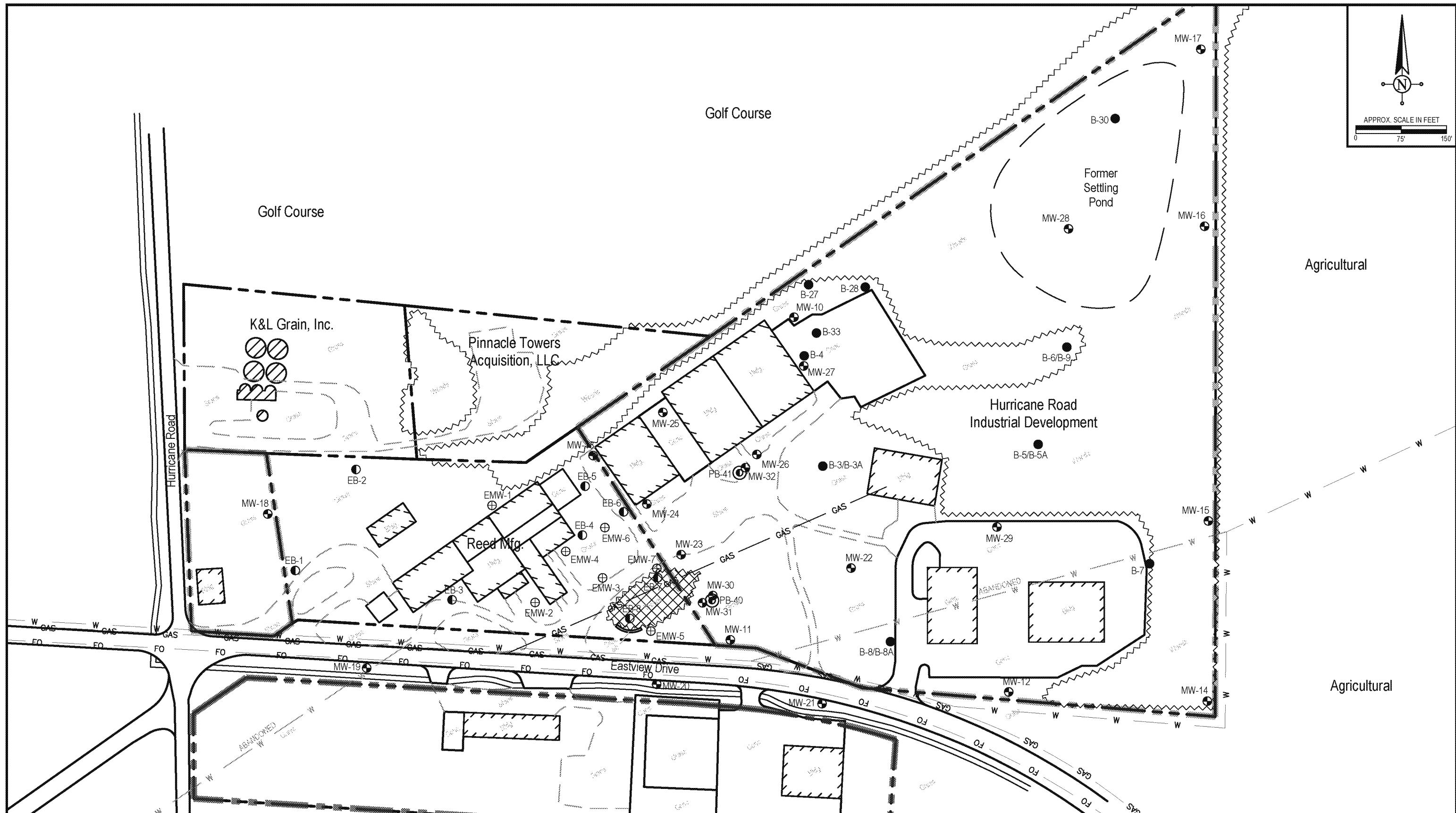
Base Map Source: USGS 7.5 Minute Topographic Map, Franklin Quadrangle (1994)



**Site Location Map
Additional Site Investigation
1130 East Eastview Drive
Franklin, Indiana**

Project No. 17-0995-01E

Figure 1



Patriot Engineering &
Environmental, Inc.

LEGEND

- Parcel Line
- Clawson Property Boundary
- W Water Line
- GAS Gas Line
- FO Fiber Optic Line

- Patriot Soil Boring Location
- Patriot Monitoring Well Location
- Rambl Environ Boring Location
- Rambl Environ Monitoring Well Location



- Patriot Indoor/Sub-Slab Air Sample Location
- Patriot Outdoor Air Sample Location

Project: Former Houghland Tomato Cannery
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Drawn By: J. DuMond
Approved: J. Cody
Date: September 7, 2017 DWG: 17-0995-01_Ph2

Figure 2
Site Map



Patriot Engineering &
Environmental, Inc.

LEGEND

- Parcel Line
- Clawson Property Boundary
- W Water Line
- GAS Gas Line
- FO Fiber Optic Line

- Previous Soil Boring Location
- Patriot Monitoring Well Location
- 2017 Additional Site Investigation Boring
- 2016 Additional Site Investigation Boring
- 2016 Additional Site Investigation Monitoring Well
- 2017 Boring for Vertical Groundwater Profiling

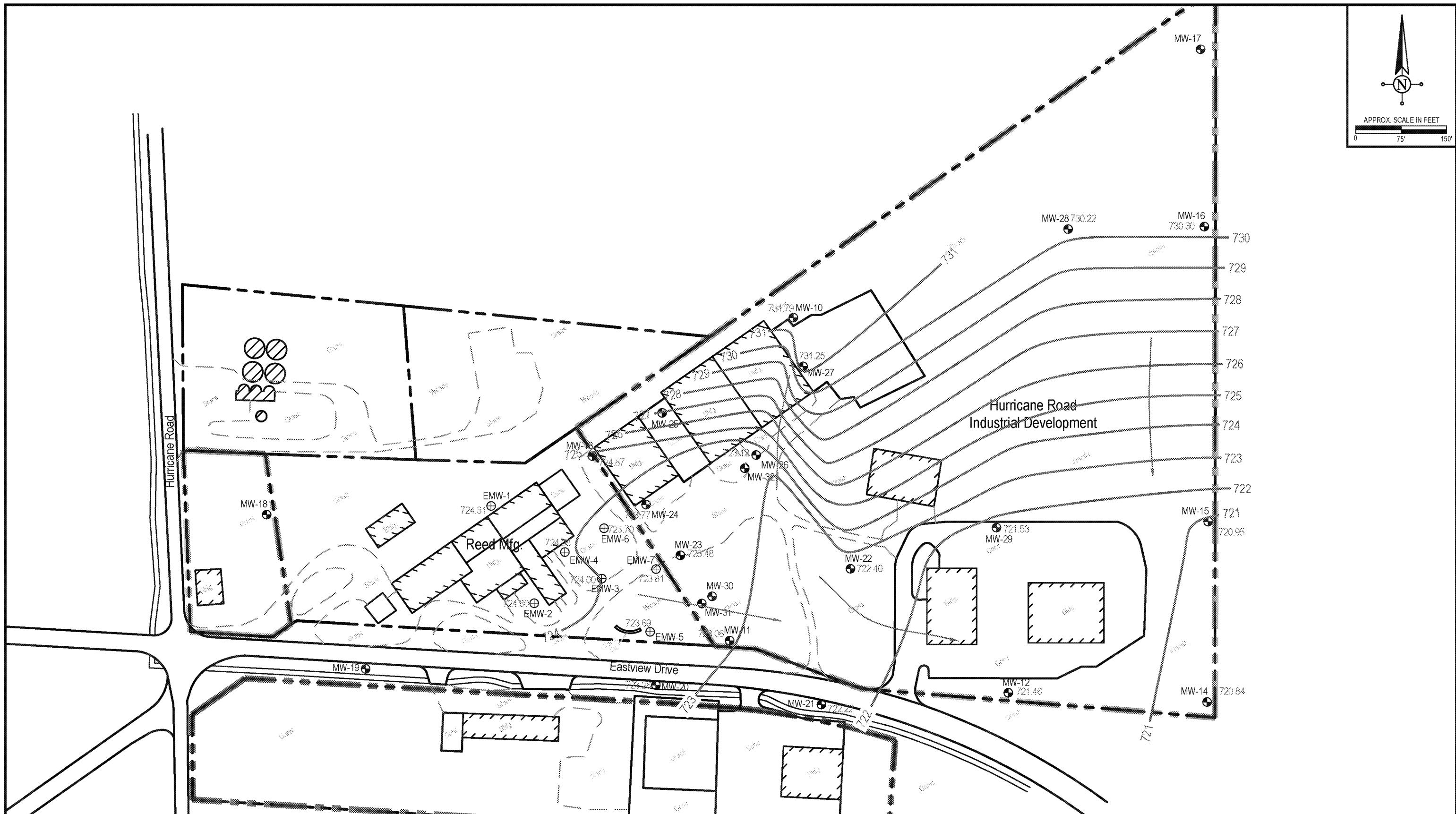
Project: Former Houghland Tomato Cannery
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

Drawn By: J. DuMond

Approved: M. Casper

Date: October 12, 2017 DWG: 17-0995-01_Ph2

Figure 3
Soil Boring Location Map



Patriot Engineering &
Environmental, Inc.

LEGEND

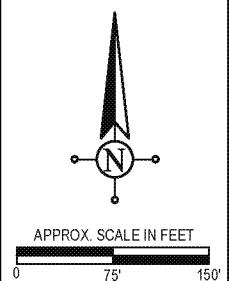
- Parcel Line
- Clawson Property Boundary
- Patriot Monitoring Well Location
- ⊕ Ramblor Environ Monitoring Well Location

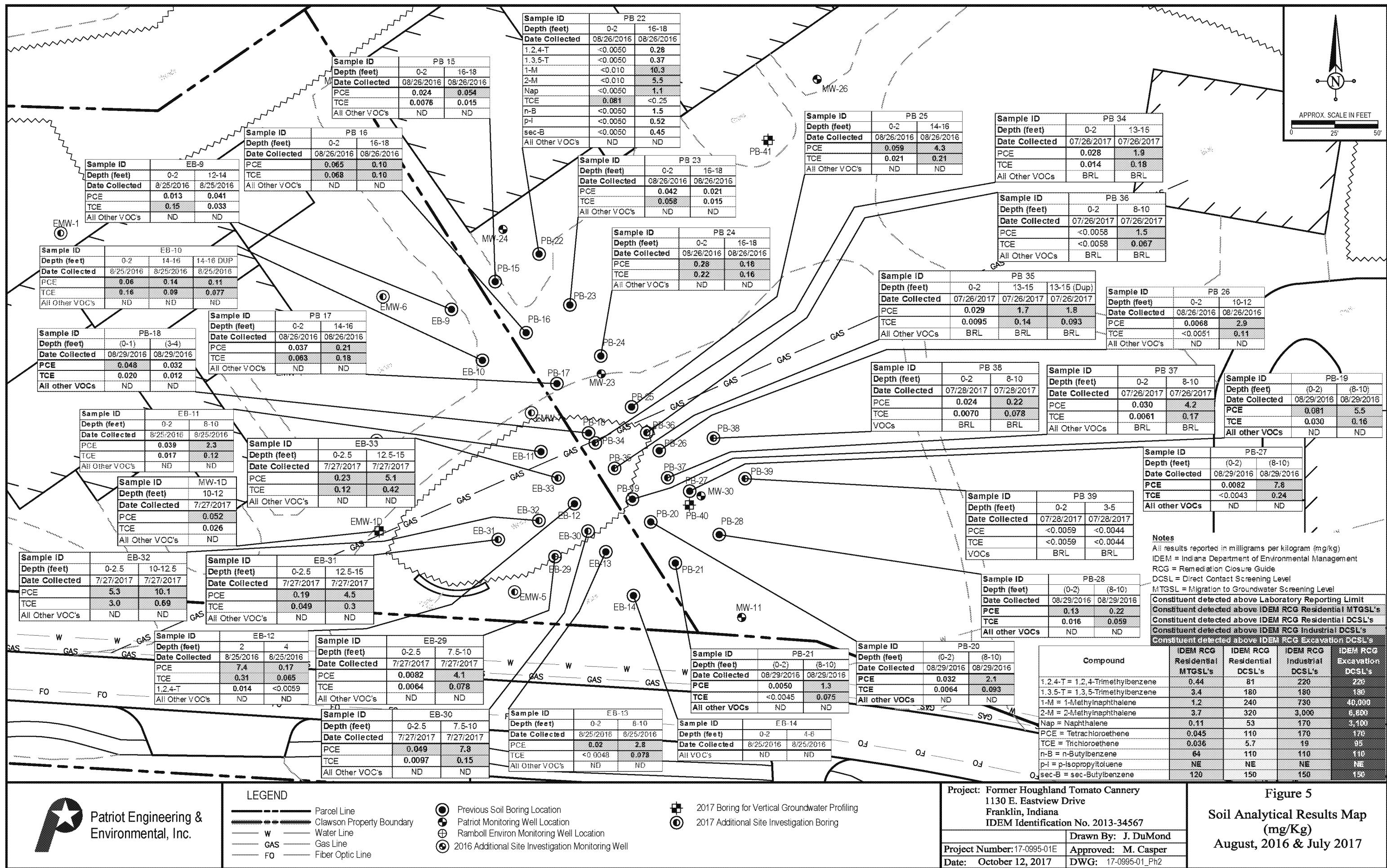
- 723.48 Groundwater Elevation
- 724 Potentiometric Surface Contour w/Elevation
- Groundwater Flow Direction

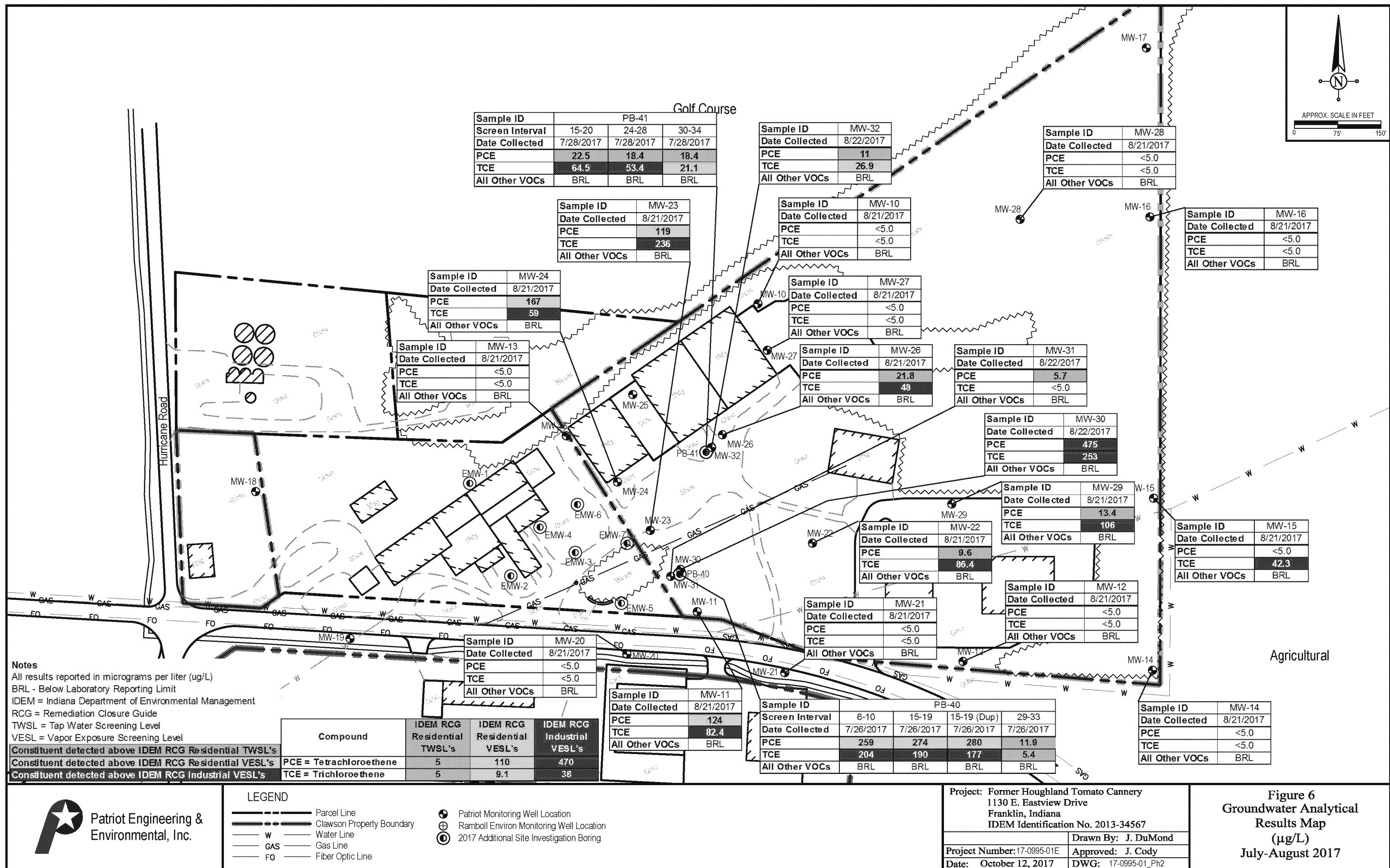
Project: Former Houghland Tomato Cannery
1130 E. Eastview Drive
Franklin, Indiana
IDEM Identification No. 2013-34567

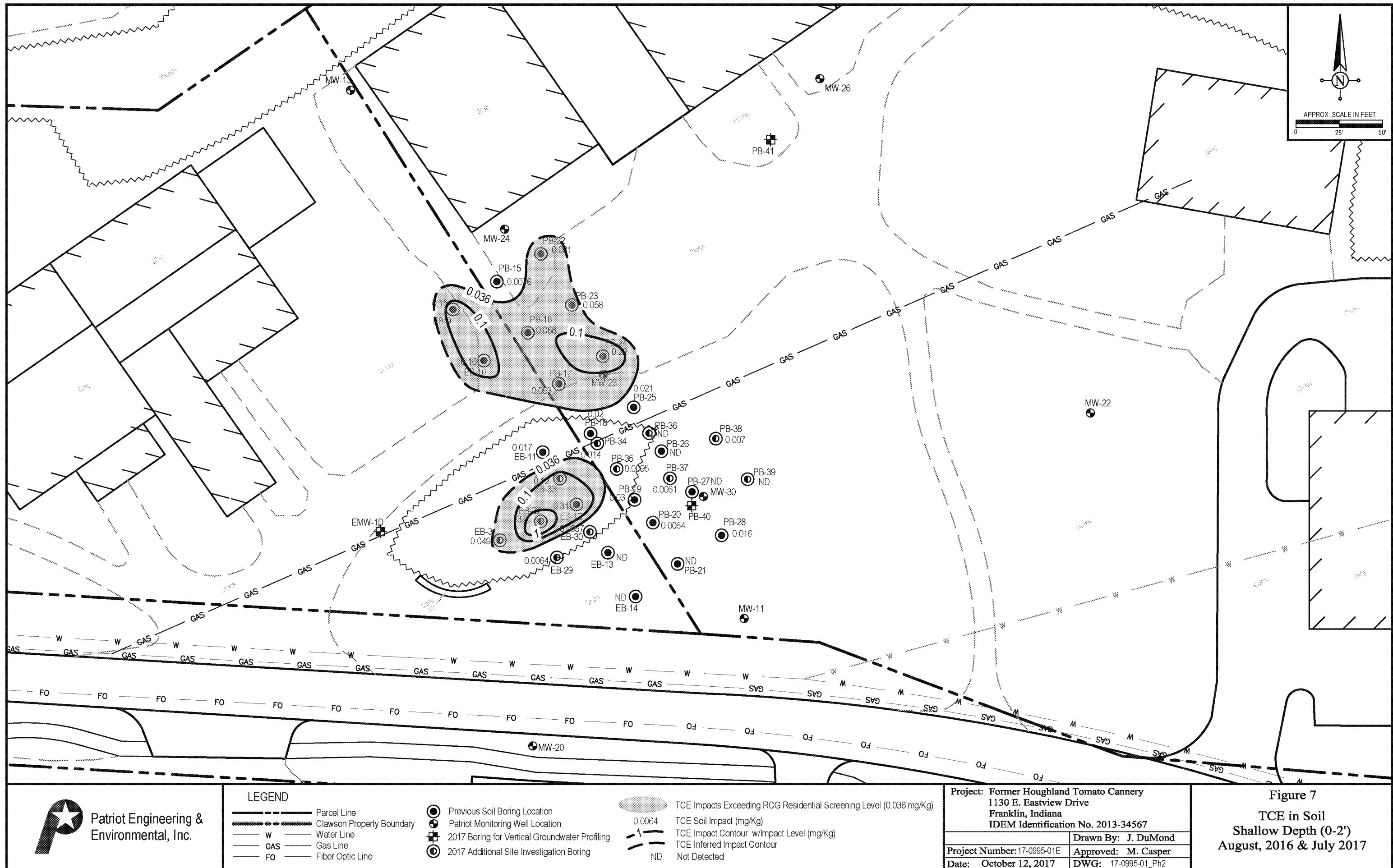
Drawn By: J. DuMond
Approved: M. Casper
Date: September 7, 2017 DWG: 17-0995-01_Ph2

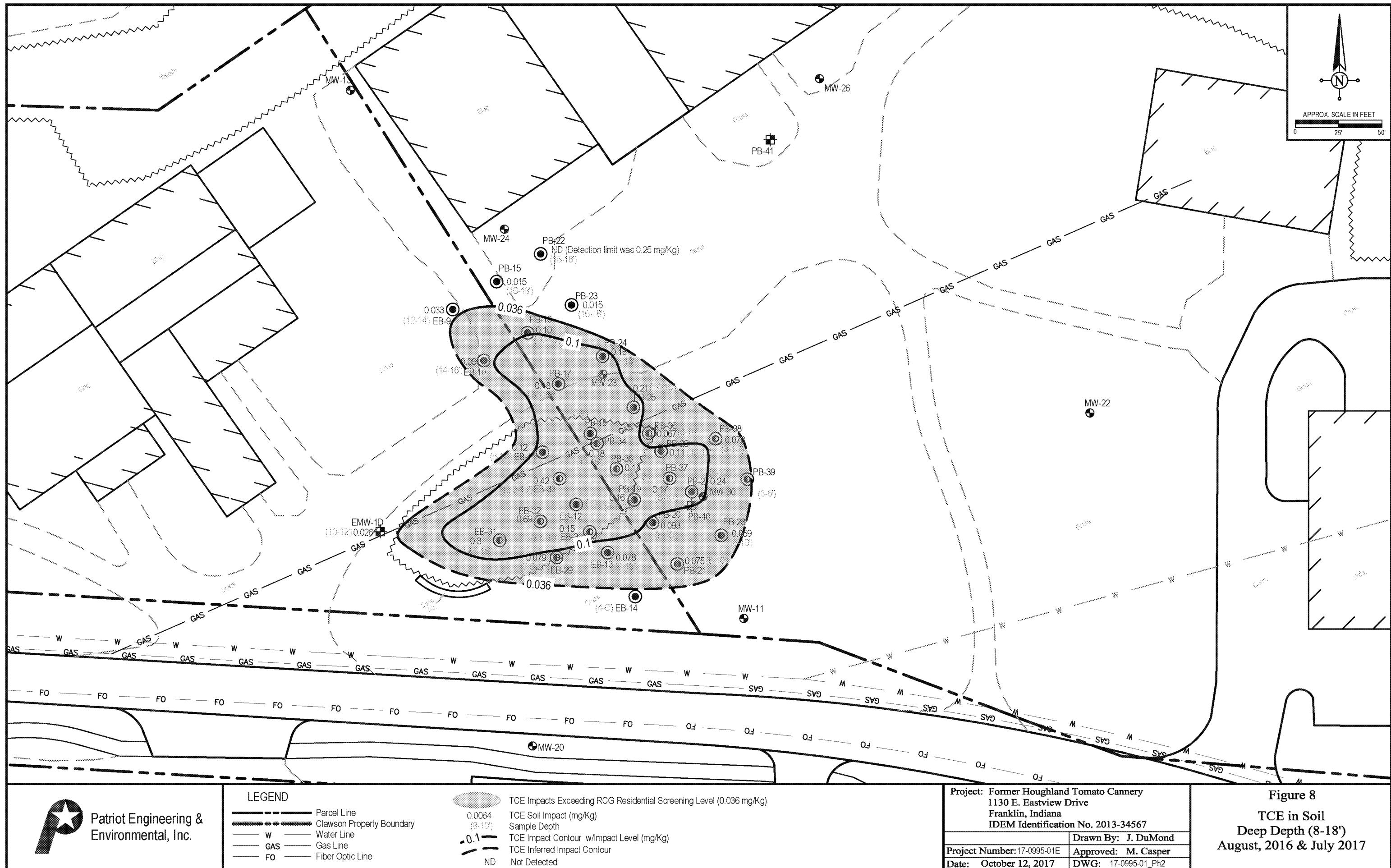
Figure 4
Potentiometric Surface Map
August 21, 2017

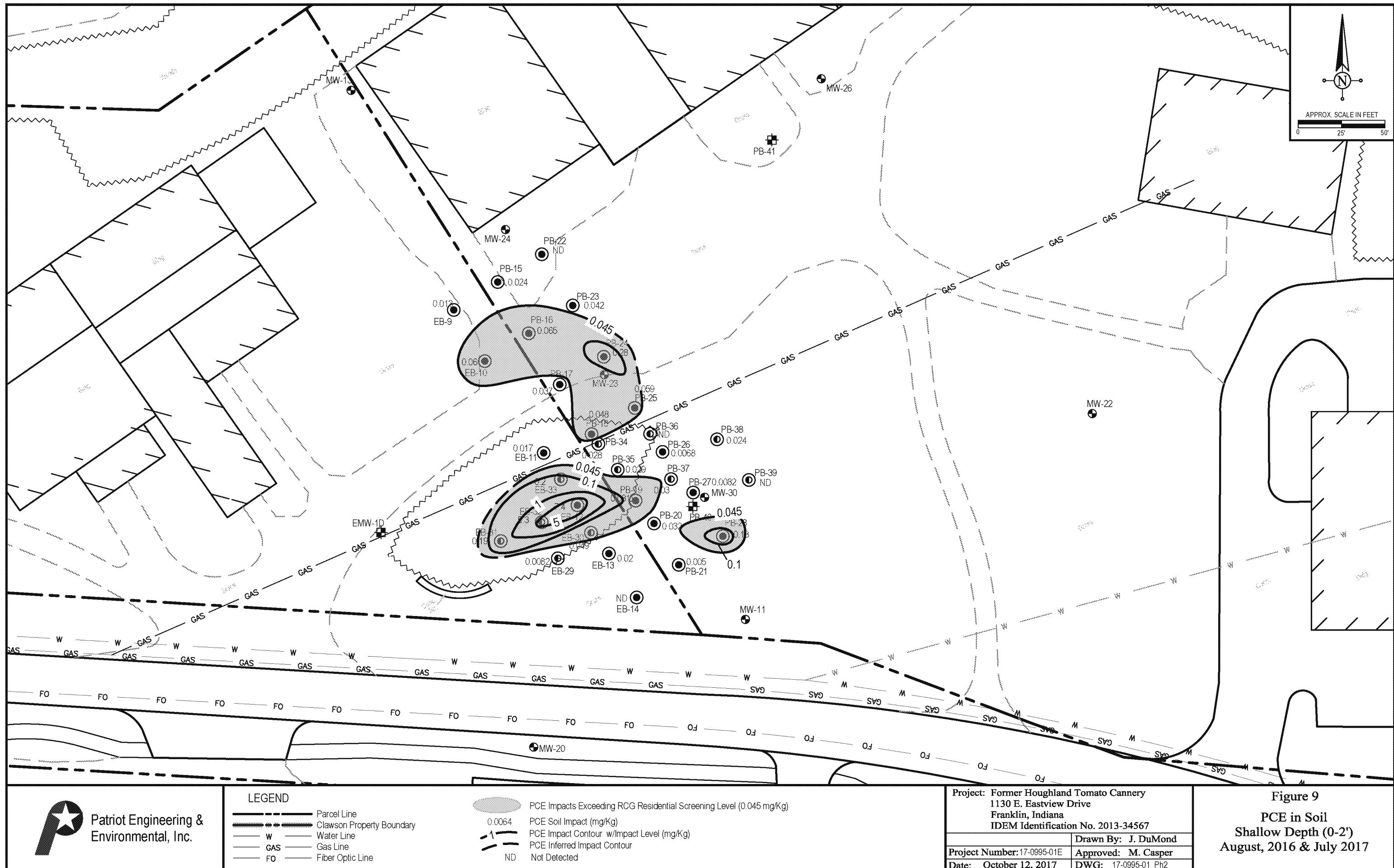


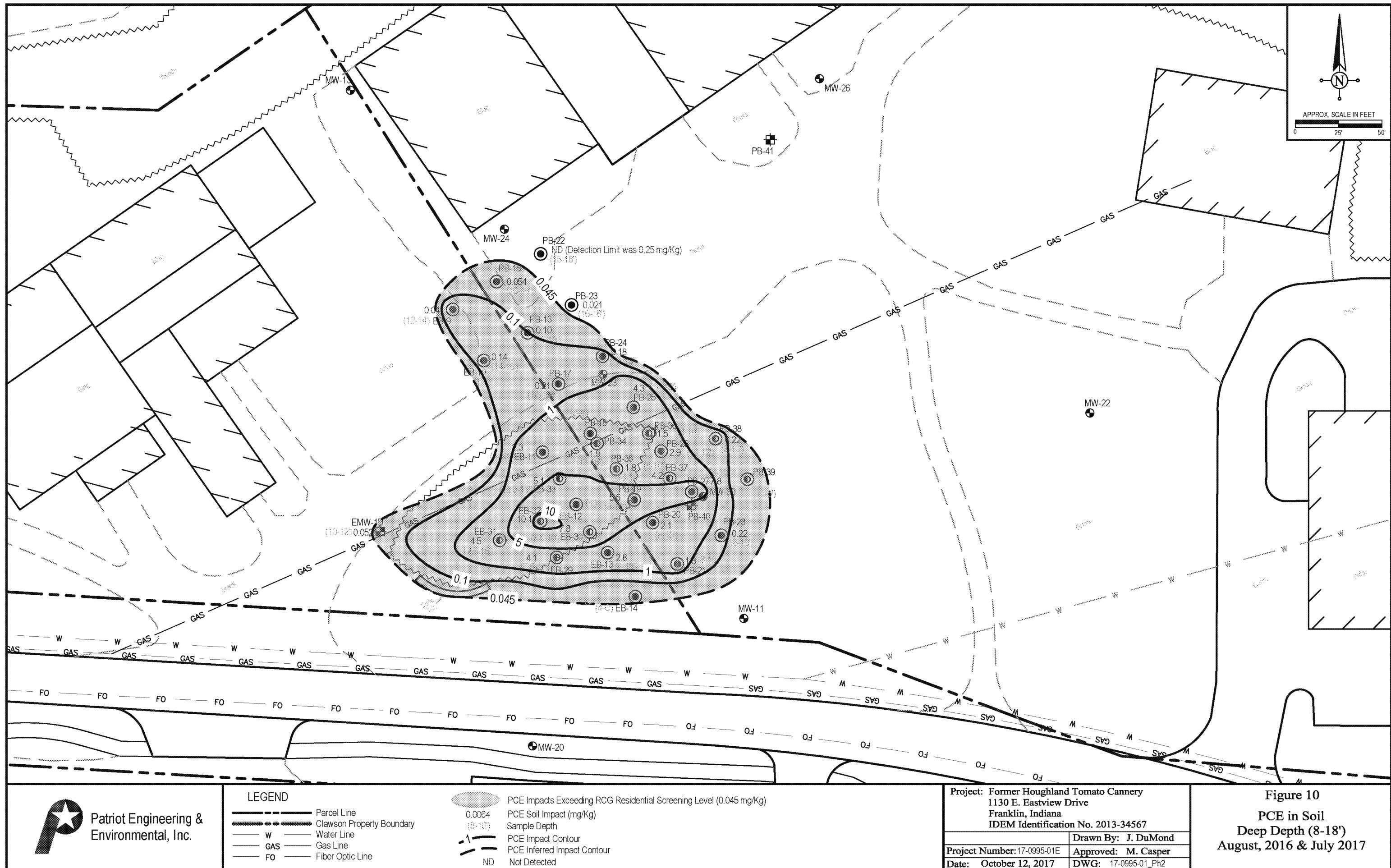












APPENDIX B

SOIL BORING LOGS AND MONITORING WELL CONSTRUCTION DIAGRAMS



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LOG OF BORING PB-34

(Page 1 of 1)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana				Project No. : 17-0995-01E Boring Date : 7/26/2017 Hole Diameter : 2 inches Drilling Method : Geoprobe Direct Push Sampling Method : N/A	Company Rep. : J. Cody Northing Coord. : N/A Easting Coord. : N/A Survey By : N/A Logged By : J. Cody			
Depth in Feet	Surf. Elev.	USCS	GRAPHIC	Water Levels			REMARKS	
				DESCRIPTION	WATER LEVEL	RECOVERY	TPV	
0				Black and brown, moist, medium stiff, SILT, w/trace sand				Begin @ 8:30 am Sample PB-34 (0-2') taken @ 8:50 am
5		ML		Black and brown, moist, medium stiff, SILT, w/increasing sand		70%	0.5	0.9
10		ML		Moist, loose, fine grained, SAND		50%	1.5	5.8
15		SW		Saturated, loose, fine grained, SAND		50%	9.9	16.1
20		SW		Boring terminated at 20 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)		50%	9.5	13.9
								End @ 9:05 am



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LOG OF BORING PB-35

(Page 1 of 1)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana				Project No. : 17-0995-01E Boring Date : 7/26/2017 Hole Diameter : 2 inches Drilling Method : Geoprobe Direct Push Sampling Method : N/A	Company Rep. : J. Cody Northing Coord. : N/A Easting Coord. : N/A Survey By : N/A Logged By : J. Cody	
Depth in Feet	Surf. Elev.	USCS	GRAPHIC	Water Levels ▼ During Drilling ▽ After Completion	WATER LEVEL RECOVERY TPV	REMARKS
DESCRIPTION						
0		F36		Moist, loose, FILL MATERIAL (chunks of glass) and substantial loose, coarse grained, GRAVEL		Begin @ 9:10 am Sample PB-35 (0-2') taken @ 9:30 am
5		ML		Red, moist, medium stiff, low plasticity, SILT	60%	1.1
10		SW		Brown, moist, loose, fine grained, SAND	50%	1.7
15		F36		Black, FILL MATERIAL, including Slag	30%	6.2
20		SW		Saturated, loose, fine grained, SAND	40%	4.0
				Boring terminated at 20 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)		21.5
						2.3
						4.5



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LOG OF BORING PB-36

(Page 1 of 1)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana				Project No. : 17-0995-01E	Company Rep. : J. Cody
Depth in Feet	Surf. Elev.	USCS	GRAPHIC	Boring Date : 7/26/2017	Northing Coord. : N/A
				Hole Diameter : 2 inches	Easting Coord. : N/A
				Drilling Method : Geoprobe Direct Push	Survey By : N/A
				Sampling Method : N/A	Logged By : J. Cody
0				Water Levels ▼ During Drilling ▽ After Completion	
				DESCRIPTION	REMARKS
0		ML		Brown, moist, medium stiff, low plasticity, SILT	Begin @ 10:09 am Sample PB-36 (0-2') taken @ 10:35 am
5		GW		Loose, medium to coarse grained, GRAVEL	1.0
5		GW		Loose, medium to coarse grained, GRAVEL and increasing Sand	10.7
10		SW		Tan, moist, loose, fine grained, SAND	20.7 6.2
15		SW		Tan, saturated, loose, fine grained, SAND	4.0 10.4 3.1
20				Boring terminated at 20 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)	



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LOG OF BORING PB-37

(Page 1 of 1)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana				Project No. : 17-0995-01E Boring Date : 7/26/2017 Hole Diameter : 2 inches Drilling Method : Geoprobe Direct Push Sampling Method : N/A	Company Rep. : J. Cody Northing Coord. : N/A Easting Coord. : N/A Survey By : N/A Logged By : J. Cody			
Depth in Feet	Surf. Elev.	USCS	GRAPHIC	Water Levels	WATER LEVEL	RECOVERY	TPV	REMARKS
				▼ During Drilling ▽ After Completion				
				DESCRIPTION				
0		ML		Moist, medium stiff, SILT, w/trace sand				
	F36			FILL MATERIAL (slag)				Begin @ 11:00 am Sample PB-37 (0-2') taken @ 11:20 am
5		ML		Moist, stiff, medium plasticity, SILT, w/trace sand		60%	2.0	4.9
10		SW		Brown, moist, loose, fine grained, SAND		60%	15.7	Sample PB-37 (8-10') taken @ 11:25 am
15		SW		Brown, saturated, loose, fine grained, SAND		70%	10.1	16.1
20				Boring terminated at 20 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)		70%	16.3	2.8 End @ 11:40 am



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LOG OF BORING PB-38

(Page 1 of 1)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana				Project No. : 17-0995-01E Boring Date : 7/28/2017 Hole Diameter : 2 inches Drilling Method : Geoprobe Direct Push Sampling Method : N/A	Company Rep. : J. Cody Northing Coord. : N/A Easting Coord. : N/A Survey By : N/A Logged By : J. Cody	
Depth in Feet	Surf. Elev.	USCS	GRAPHIC	Water Levels ▼ During Drilling ▽ After Completion	WATER LEVEL RECOVERY TPV	REMARKS
				DESCRIPTION		
0		CO		TOPSOIL		
	F36			FILL MATERIAL		
5	CH			moist, medium stiff, high plasticity, CLAY w/ SILT,		
5	SW			Brown, moist, loose, fine grained, SAND		
10	SW			Tan, moist, loose, fine grained, SAND		
15	SW			Tan, saturated, loose, fine grained, SAND		
20				Boring terminated at 20 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)		



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LOG OF BORING PB-39

(Page 1 of 1)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana				Project No. : 17-0995-01E Boring Date : 7/28/2017 Hole Diameter : 2 inches Drilling Method : Geoprobe Direct Push Sampling Method : N/A	Company Rep. : J. Cody Northing Coord. : N/A Easting Coord. : N/A Survey By : N/A Logged By : J. Cody			
Depth in Feet	Surf. Elev.	USCS	GRAPHIC	Water Levels	WATER LEVEL	RECOVERY	TPV	REMARKS
0		CO		TOPSOIL				
		ML		Brown, moist, stiff, low plasticity, SILT w/ Sand				Sample PB-39 (0-2') taken @ 8:15 am
		ML		Brown and trace black discoloration, moist, stiff, low plasticity, SILT w/ Sand		60%	2.0	Sample PB-39 (3-5') taken @ 8:20 am, MS/MSD sample taken
5		SW		Dark brown, moist, fine grained, SAND			2.8	
		SW		Tan, moist, fine grained, SAND			3.1	
10				Tan, saturated, fine grained, SAND		▼	9.9	
		SW					14.5	
15							5.3	
							2.5	
20				Boring terminated at 20 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				



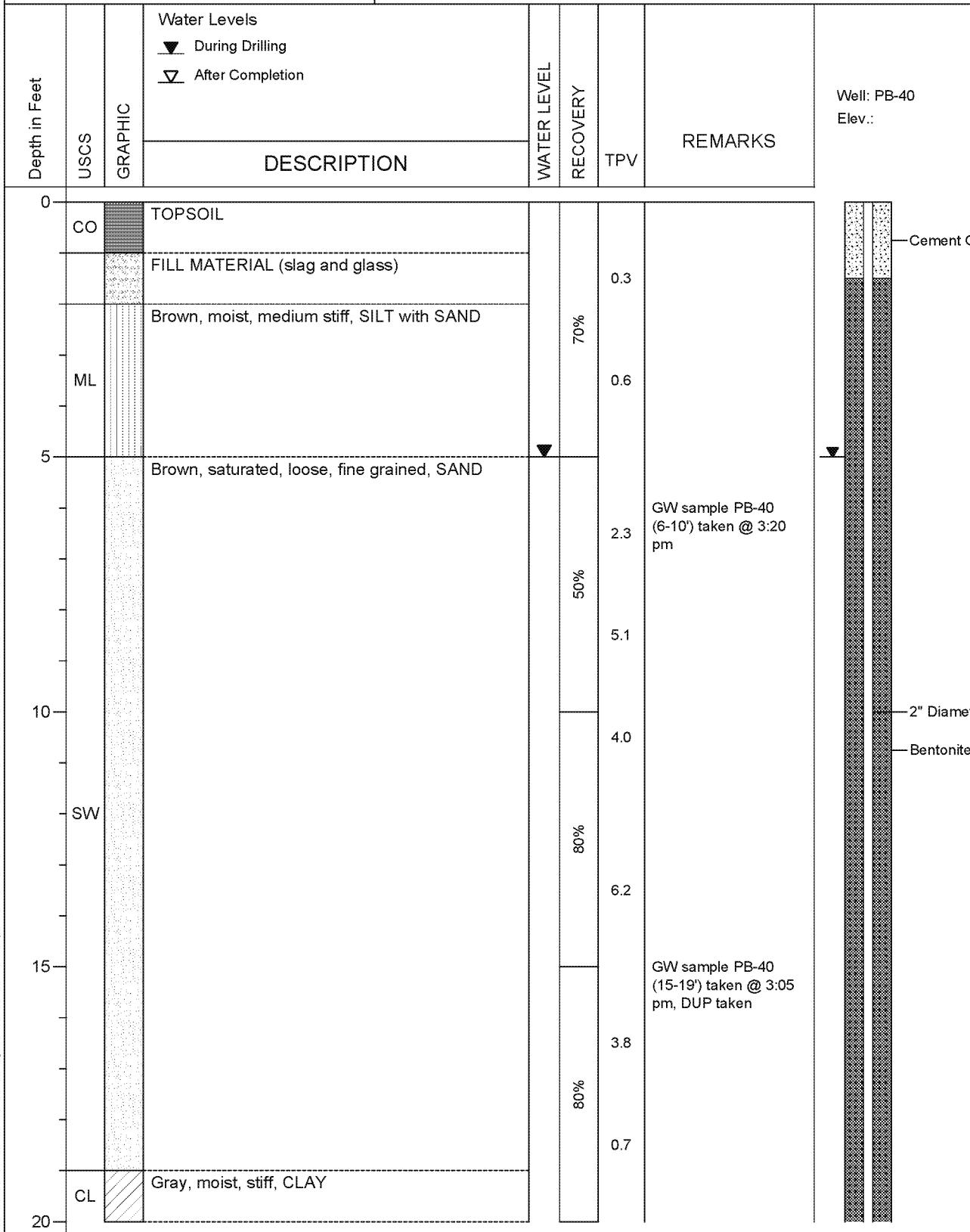
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LOG OF BORING PB-40

(Page 1 of 2)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana		Project No. : 17-0995-01E	Company Rep. : J. Cody
		Boring Date : 7/28/2017	Northing Coord. : N/A
		Hole Diameter : 2 inches	Easting Coord. : N/A
		Drilling Method : Geoprobe Direct Push	Survey By : N/A
		Sampling Method : N/A	Logged By : J. Cody





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LOG OF BORING PB-40

(Page 2 of 2)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana			Project No. Boring Date Hole Diameter Drilling Method Sampling Method	: 17-0995-01E : 7/28/2017 : 2 inches : Geoprobe Direct Push : N/A	Company Rep. Northing Coord. Easting Coord. Survey By Logged By	: J. Cody : N/A : N/A : N/A : J. Cody
Depth in Feet	USCS	GRAPHIC	Water Levels ▼ During Drilling ▽ After Completion	WATER LEVEL RECOVERY TPV	REMARKS	Well: PB-40 Elev.:
			DESCRIPTION			
20	SW		Saturated, loose, fine grained, SAND			
22	CL		Gray, moist, stiff, CLAY w/trace silt			
25	SW		Saturated, loose, fine grained, SAND			
27	CL		Gray, moist, stiff, CLAY			
30	CL				GW sample PB-40 (29-33') taken @ 2:55 pm	
35	Boring terminated at 35 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)			100%	100%	
40				100%	100%	

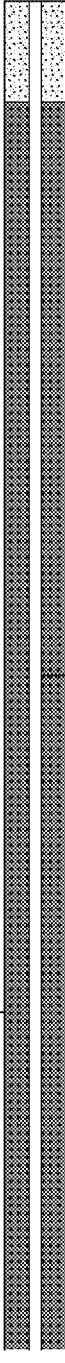


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LOG OF BORING PB-41

(Page 1 of 2)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana			Project No. Boring Date Hole Diameter Drilling Method Sampling Method	: 17-0995-01E : 7/28/2017 : 2 inches : Geoprobe Direct Push : N/A	Company Rep. Northing Coord. Easting Coord. Survey By Logged By	: J. Cody : N/A : N/A : N/A : J. Cody
Depth in Feet	USCS	GRAPHIC	Water Levels ▼ During Drilling ▽ After Completion	WATER LEVEL RECOVERY TPV	REMARKS	Well: PB-41 Elev.:
			DESCRIPTION			
0	SW		Light gray, moist, loose, fine grained, SAND w/coarse grained, Gravel		Begin @ 8:50 am	 Diameter PVC'. Further down, another section is labeled 'Bentonite Chips'. The borehole contains several horizontal layers of different soil types: 'Black, moist, FILL MATERIAL (slag)', 'Brown, moist, medium stiff, SILT with SAND', 'Brown, moist, loose, fine grained, SAND', 'Tan, moist, fine grained, SAND w/trace coarse grained gravel', and 'Tan, saturated, fine grained, SAND w/trace coarse grained gravel'. The borehole has a diameter of 2 inches."/>
-F36			Black, moist, FILL MATERIAL (slag)		70%	2.0
5	ML		Brown, moist, medium stiff, SILT with SAND		50%	2.5
10	SW		Brown, moist, loose, fine grained, SAND			1.7
10			Tan, moist, fine grained, SAND w/trace coarse grained gravel			2.2
15	SW					1.9
15			Tan, saturated, fine grained, SAND w/trace coarse grained gravel			1.3
20	SW					



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LOG OF BORING PB-41

(Page 2 of 2)

Haughland Canning Additional Investigation 1130 E. Eastview Drive Franklin, Indiana			Project No. : 17-0995-01E	Company Rep. : J. Cody
			Boring Date : 7/28/2017	Northing Coord. : N/A
			Hole Diameter : 2 inches	Easting Coord. : N/A
			Drilling Method : Geoprobe Direct Push	Survey By : N/A
			Sampling Method : N/A	Logged By : J. Cody
Depth in Feet	USCS	GRAPHIC	WATER LEVEL	RECOVERY
		Water Levels ▼ During Drilling ▽ After Completion		TPV
		DESCRIPTION		REMARKS
20		NO RECOVERY		
25	SW	Tan, saturated, coarse grained, SAND w/ Gravel	3.2	0% GW sample PB-41 (24-28') taken @ 10:20 am
30			1.3	100%
35	CL	Gray, moist, stiff, CLAY w/ small pebbles	3.8	100% GW sample PB-41 (30-34') taken @ 10:15 am
40			2.0	
Boring terminated at 38 ft bgs Note: TPV = Total Photoionizable Vapors in parts per million (PPM)				

APPENDIX C

TABLES

TABLE 1
WELL CONSTRUCTION SUMMARY
Former Houghland Tomato Cannery
1130 East Eastview Drive
Franklin, Indiana
Patriot Project Number 17-0995-01E

WELL	DATE INSTALLED	WELL ELEVATION (ft)*	TOTAL DEPTH (ft)	SCREEN INTERVAL (depth in ft)
MW-10	6/10/2013 (ISI)	738.15	14.4	723.8 - 733.8
MW-11	6/10/2013 (ISI)	731.85	13.7	718.2 - 728.2
MW-12	6/10/2013 (ISI)	732.36	15.1	717.3 - 727.3
MW-13	6/10/2013 (ISI)	740.45	20.9	719.6 - 729.6
MW-14	9/18/2013 (ISI)	734.15	20.0	714.2 - 724.2
MW-15	9/18/2013 (ISI)	735.30	21.0	714.3 - 724.3
MW-16	9/18/2013 (ISI)	735.65	19.9	715.7 - 725.7
MW-17	9/18/2013 (ISI)	745.02	24.1	720.9 - 730.9
MW-18	2/13/2014 (FSI)	737.39	14.4	723.0 - 733.0
MW-19	2/13/2014 (FSI)	733.21	12.4	720.8 - 730.8
MW-20	2/13/2014 (FSI)	729.99	14.7	715.3 - 725.3
MW-21	2/13/2014 (FSI)	729.21	13.6	715.6 - 725.6
MW-22	2/13/2014 (FSI)	736.47	18.9	717.6 - 727.6
MW-23	2/13/2014 (FSI)	739.78	20.0	719.8 - 729.8
MW-24	2/13/2014 (FSI)	740.93	21.8	719.1 - 729.1
MW-25	2/14/2014 (FSI)	741.01	23.6	717.4 - 727.4
MW-26	2/14/2014 (FSI)	739.31	22.9	716.4 - 726.4
MW-27	2/14/2014 (FSI)	740.06	16.9	723.2 - 733.2
MW-28	2/19/2014 (FSI)	739.62	21.3	718.3 - 728.3
MW-29	2/13/2014 (FSI)	732.96	17.6	715.4 - 725.4
MW-30	8/29/2016 (FSI)	NS	14.5	NS
MW-31	8/16/2017 (ASI)	NS	30.0	NS
MW-32	8/16/2017 (ASI)	NS	33.0	NS

Table Notes:

All top of casing elevations were surveyed by Kimbley & Proctor, Inc and are based on USC & GS Datum.

ISC = Initial Site Characterization

FSI = Further Site Investigation

ASI = Additional Site Investigation

NS = Not Surveyed

*Note: Well Elevation = Top of the 2" Diameter Pipe - North Rim

TABLE 2
GROUNDWATER ELEVATION DATA
Former Houghland Tomato Cannery
1130 East Eastview Drive
Franklin, Indiana
Patriot Project Number 17-0995-01E

Well Identification	Date	Well Elevation (feet)	Depth to Groundwater	Groundwater Elevation
MW-10	9/24/2013	738.15	8.89	729.26
	3/5/2014		4.95	733.20
	8/31/2016		5.35	732.80
	8/21/2017		6.36	731.79
MW-11	9/24/2013	731.85	10.56	721.29
	3/5/2014		7.95	723.90
	8/31/2016		8.45	723.40
	8/21/2017		8.79	723.06
MW-12	9/24/2013	732.36	12.14	720.22
	3/5/2014		9.68	722.68
	8/31/2016		10.55	721.81
	8/21/2017		10.90	721.46
MW-13	9/24/2013	740.45	18.69	721.76
	3/5/2014		15.58	731.56
	8/31/2016		15.94	724.51
	8/21/2017		15.58	724.87
MW-14	9/24/2013	734.15	14.32	719.83
	3/5/2014		11.95	722.20
	8/31/2016		Well Inaccessible	
	8/21/2017		13.31	720.84
MW-15	9/24/2013	735.30	15.41	719.89
	3/5/2014		12.98	722.32
	8/31/2016		Well Inaccessible	
	8/21/2017		14.35	720.95
MW-16	9/24/2013	735.65	7.06	728.59
	3/5/2014		2.88	732.77
	8/31/2016		Well Inaccessible	
	8/21/2017		5.35	730.30
MW-17	9/24/2013	745.02	16.22	728.80
	3/5/2014		12.00	733.02
	8/31/2016		Well Inaccessible	
	8/21/2017		NS	NS
MW-18	3/5/2014	737.79	10.03	727.76
	8/31/2016		10.32	727.47
	8/21/2017		NS	NS
MW-19	3/5/2014	733.21	7.17	726.04
	8/31/2016		7.55	725.66
	8/21/2017		NS	NS
MW-20	3/5/2014	729.99	5.94	724.05
	8/31/2016		6.38	723.61
	8/21/2017		6.71	723.28
MW-21	3/5/2014	729.21	6.04	723.17
	8/31/2016		6.64	722.57
	8/21/2017		6.99	722.22
MW-22	3/5/2014	736.47	13.04	723.43
	8/31/2016		13.68	722.79
	8/21/2017		14.07	722.40
MW-23	3/5/2014	739.78	15.40	724.38
	8/31/2016		15.91	723.87
	8/21/2017		16.30	723.48
MW-24	3/5/2014	740.93	16.31	724.62
	8/31/2016		16.71	724.22
	8/21/2017		17.16	723.77

TABLE 2
GROUNDWATER ELEVATION DATA
Former Houghland Tomato Cannery
1130 East Eastview Drive
Franklin, Indiana
Patriot Project Number 17-0995-01E

MW-25	3/5/2014	741.01	16.50	724.51
	8/31/2016		Well Inaccessible	
	8/21/2017		Well Inaccessible	
MW-26	3/5/2014	739.31	15.25	724.06
	8/31/2016		15.80	723.51
	8/21/2017		16.19	723.12
MW-27	3/5/2014	740.06	8.11	731.95
	8/31/2016		8.19	731.87
	8/21/2017		8.81	731.25
MW-28	3/5/2014	739.62	6.72	732.90
	8/31/2016		Well Inaccessible	
	8/21/2017		9.40	730.22
MW-29	3/5/2014	732.96	10.17	722.79
	8/31/2016		11.04	721.92
	8/21/2017		11.43	721.53
MW-30	8/31/2016	Not Surveyed	10.17	NA
	8/21/2017		10.64	NA
MW-31	8/21/2017	Not Surveyed	11.69	NA
MW-32	8/21/2017	Not Surveyed	16.64	NA

Well Elevation = Top of the 2" Diameter Pipe - North Rim

TABLE 3**SOIL ANALYTICAL RESULTS (Detections Only)**

Hurricane Road Industrial Development / Former Houghland Tomato Cannery
 1130 East Eastview Drive
 Franklin, Indiana
 Patriot Project Number 17-0995-01E

	Analyte	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Tetrachloroethene	Trichloroethene	n-Butylbenzene	p-Isopropyltoluene	sec-Butylbenzene	All Remaining VOCs
Residential Direct Contact	81	180	240	320	53	110	5.7	110	NE	150	Varies	
Ind. / Comm. Direct Contact	220	180	730	3000	170	170	19	110	NE	150	Varies	
Excavation Direct Contact	220	180	40000	6800	3,100	170	95	110	NE	150	Varies	
Soil Migration to Groundwater	0.44	3.4	1.2	3.7	0.11	0.045	0.036	64	NE	120	Varies	
Sample ID	Collected Date	Patriot FSI & ASI: August 2016 and July 2017										
PB15 (0'-2')	8/26/2016	<0.0046	<0.0046	<0.0092	<0.0092	<0.0046	0.024	0.0076	<0.0046	<0.0046	<0.0046	BRL
PB15 (16'-18')	8/26/2016	<0.0045	<0.0045	<0.0090	<0.0090	<0.0045	0.054	0.015	<0.0045	<0.0045	<0.0045	BRL
PB16 (0'-2')	8/26/2016	<0.0043	<0.0043	<0.0085	<0.0085	<0.0043	0.065	0.068	<0.0043	<0.0043	<0.0043	BRL
PB16 (16'-18')	8/26/2016	<0.0050	<0.0050	<0.010	<0.010	<0.0050	0.10	0.10	<0.0050	<0.0050	<0.0050	BRL
PB17 (0'-2')	8/26/2016	<0.0045	<0.0045	<0.0090	<0.0090	<0.0045	0.037	0.063	<0.0045	<0.0045	<0.0045	BRL
PB17 (14'-16')	8/26/2016	<0.0049	<0.0049	<0.0099	<0.0099	<0.0049	0.210	0.18	<0.0049	<0.0049	<0.0049	BRL
PB18 (0'-2')	8/29/2016	<0.0062	<0.0062	<0.012	<0.012	<0.0062	0.048	0.020	<0.0062	<0.0062	<0.0062	BRL
PB18 (3'-4')	8/29/2016	<0.0045	<0.0045	<0.0090	<0.0090	<0.0045	0.032	0.012	<0.0045	<0.0045	<0.0045	BRL
PB19 (0'-2')	8/29/2016	<0.0047	<0.0047	<0.0094	<0.0094	<0.0047	0.081	0.030	<0.0047	<0.0047	<0.0047	BRL
PB19 (8'-10')	8/29/2016	<0.0050	<0.0050	<0.010	<0.010	<0.0050	5.5	0.16	<0.0050	<0.0050	<0.0050	BRL
PB20 (0'-2')	8/29/2016	<0.0055	<0.0055	<0.011	<0.011	<0.0055	0.032	0.006	<0.0055	<0.0055	<0.0055	BRL
PB20 (8'-10')	8/29/2016	<0.0050	<0.0050	<0.010	<0.010	<0.0050	2.1	0.093	<0.0050	<0.0050	<0.0050	BRL
DUP-B	8/29/2016	<0.0045	<0.0045	<0.0090	<0.0090	<0.0045	1.9	0.083	<0.0045	<0.0045	<0.0045	BRL
PB21 (0'-2')	8/29/2016	<0.0045	<0.0045	<0.0090	<0.0090	<0.0045	0.005	<0.0045	<0.0045	<0.0045	<0.0045	BRL
PB21 (8'-10')	8/29/2016	<0.0056	<0.0056	<0.011	<0.011	<0.0056	1.3	0.075	<0.0056	<0.0056	<0.0056	BRL
PB22 (0'-2')	8/26/2016	<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	0.081	<0.0050	<0.0050	<0.0050	BRL
PB22 (16'-18')	8/26/2016	0.28	0.37	10.3	5.5	1.1	<0.25	<0.25	1.5	0.52	0.45	BRL
PB23 (0'-2')	8/26/2016	<0.0045	<0.0045	<0.0090	<0.0090	<0.0045	0.042	0.058	<0.0045	<0.0045	<0.0045	BRL
PB23 (16'-18')	8/26/2016	<0.0047	<0.0047	<0.0093	<0.0093	<0.0047	0.021	0.015	<0.0047	<0.0047	<0.0047	BRL
PB24 (0'-2')	8/26/2016	<0.0054	<0.0054	<0.011	<0.011	<0.0054	0.28	0.22	<0.0054	<0.0054	<0.0054	BRL
PB24 (16'-18')	8/26/2016	<0.0053	<0.0053	<0.011	<0.011	<0.0053	0.18	0.16	<0.0053	<0.0053	<0.0053	BRL
PB25 (0'-2')	8/26/2016	<0.0047	<0.0047	<0.0095	<0.0095	<0.0047	0.059	0.021	<0.0047	<0.0047	<0.0047	BRL
PB25 (14'-16')	8/26/2016	<0.0046	<0.0046	<0.0093	<0.0093	<0.0046	4.3	0.21	<0.0046	<0.0046	<0.0046	BRL
PB26 (0'-2')	8/26/2016	<0.0051	<0.0051	<0.010	<0.010	<0.0051	0.007	<0.0051	<0.0051	<0.0051	<0.0051	BRL
PB26 (10'-12')	8/26/2016	<0.0052	<0.0052	<0.010	<0.010	<0.0052	2.9	0.11	<0.0052	<0.0052	<0.0052	BRL
PB27 (0'-2')	8/29/2016	<0.0043	<0.0043	<0.0087	<0.0087	<0.0043	0.0082	<0.0043	<0.0043	<0.0043	<0.0043	BRL
PB27 (8'-10')	8/29/2016	<0.0044	<0.0044	<0.0089	<0.0089	<0.0044	7.8	0.24	<0.0044	<0.0044	<0.0044	BRL
DUP-A	8/29/2016	<0.0036	<0.0036	<0.0073	<0.0073	<0.0036	5.6	0.21	<0.0036	<0.0036	<0.0036	BRL
PB28 (0'-2')	8/29/2016	<0.0049	<0.0049	<0.0098	<0.0098	<0.0049	0.13	0.016	<0.0049	<0.0049	<0.0049	BRL
PB28 (8'-10')	8/29/2016	<0.0054	<0.0054	<0.011	<0.011	<0.0054	0.22	0.059	<0.0054	<0.0054	<0.0054	BRL
PB34 (0'-2')	7/26/2017	<0.0046	<0.0046	<0.0091	<0.0091	<0.0046	0.028	0.014	<0.0046	<0.0046	<0.0046	BRL
PB34 (13'-15')	7/26/2017	<0.0050	<0.0050	<0.010	<0.010	<0.0050	1.9	0.18	<0.0050	<0.0050	<0.0050	BRL
PB35 (0'-2')	7/26/2017	<0.0053	<0.0053	<0.011	<0.011	<0.0053	0.029	0.0095	<0.0053	<0.0053	<0.0053	BRL
PB35 (13'-15')	7/26/2017	<0.0044	<0.0044	<0.0089	<0.0089	<0.0044	1.7	0.14	<0.0044	<0.0044	<0.0044	BRL
DUP	7/26/2017	<0.0044	<0.0044	<0.0089	<0.0089	<0.0044	1.8	0.01	<0.0044	<0.0044	<0.0044	BRL
PB36 (0'-2')	7/26/2017	<0.0058	<0.0058	<0.012	<0.012	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	BRL
PB36 (8'-10')	7/26/2017	<0.0047	<0.0047	<0.0094	<0.0094	<0.0047	1.5	0.067	<0.0047	<0.0047	<0.0047	BRL
PB37 (0'-2')	7/26/2017	<0.0055	<0.0055	<0.011	<0.011	<0.0055	0.03	0.0061	<0.0055	<0.0055	<0.0055	BRL
PB37 (8'-10')	7/26/2017	<0.0048	<0.0048	<0.0096	<0.0096	<0.0048	4.2	0.17	<0.0048	<0.0048	<0.0048	BRL
PB38 (0'-2')	7/28/2017	<0.0056	<0.0056	<0.011	<0.011	<0.0056	0.024	0.007	<0.0056	<0.0056	<0.0056	BRL

TABLE 3
SOIL ANALYTICAL RESULTS (Detections Only)
 Hurricane Road Industrial Development / Former Houghland Tomato Cannery
 1130 East Eastview Drive
 Franklin, Indiana
 Patriot Project Number 17-0995-01E

	Analyte	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Tetrachloroethene	Trichloroethene	n-Butylbenzene	p-Isopropyltoluene	sec-Butylbenzene	All Remaining VOCs
Residential Direct Contact	81	180	240	320	53	110	5.7	110	NE	150	Varies	
Ind. / Comm. Direct Contact	220	180	730	3000	170	170	19	110	NE	150	Varies	
Excavation Direct Contact	220	180	40000	6800	3,100	170	95	110	NE	150	Varies	
Soil Migration to Groundwater	0.44	3.4	1.2	3.7	0.11	0.045	0.036	64	NE	120	Varies	
PB38 (8'-10')	7/28/2017	<0.0049	<0.0049	<0.0098	<0.0098	<0.0049	0.2	0.078	<0.0049	<0.0049	<0.0049	BRL
PB39 (0'-2')	7/28/2017	<0.0059	<0.0059	<0.012	<0.012	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	BRL
PB39 (3'-5')	7/28/2017	<0.0044	<0.0044	<0.0087	<0.0087	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	BRL
	Collected Date	Ramboll Environ FSI & ASI: August 2016 and July 2017										
EB09 (0'-2')	8/25/2016	<0.0065	<0.0065	<0.0013	<0.0065	<0.0065	0.013	0.15	<0.0065	<0.0065	<0.0065	BRL
EB09 (12'-14')	8/25/2016	<0.0053	<0.0053	<0.0013	<0.0053	<0.0053	0.041	0.033	<0.0053	<0.0053	<0.0053	BRL
EB10 (0'-2')	8/25/2016	<0.0044	<0.0044	<0.0089	<0.0044	<0.0044	0.060	0.16	<0.0044	<0.0044	<0.0044	BRL
EB10 (14'-16')	8/25/2016	<0.0053	<0.0053	<0.011	<0.0053	<0.0053	0.14	0.090	<0.0053	<0.0053	<0.0053	BRL
EB11 (0'-2')	8/25/2016	<0.0041	<0.0041	<0.0082	<0.0041	<0.0041	0.039	0.017	<0.0041	<0.0041	<0.0041	BRL
EB11 (8'-10')	8/25/2016	<0.0050	<0.0050	<0.0099	<0.0050	<0.0050	2.3	0.12	<0.0050	<0.0050	<0.0050	BRL
EB12 (2')	8/25/2016	<0.0070	<0.0070	<0.0014	<0.0070	<0.0070	7.4	0.31	<0.0070	<0.0070	<0.0070	BRL
EB12 (4')	8/25/2016	<0.0059	<0.0059	<0.012	<0.0059	<0.0059	0.17	0.065	<0.0059	<0.0059	<0.0059	BRL
EB13 (0'-2')	8/25/2016	<0.0048	<0.0048	<0.0097	<0.0048	<0.0048	0.020	<0.0048	<0.0048	<0.0048	<0.0048	BRL
EB13 (8'-10')	8/25/2016	<0.0050	<0.0050	<0.010	<0.010	<0.0050	2.8	0.078	<0.0050	<0.0050	<0.0050	BRL
EB14 (0'-2')	8/25/2016	<0.0047	<0.0047	<0.0094	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	BRL
EB14 (4'-6')	8/25/2016	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	BRL
MW1D(10'-12')	7/26/2017	<0.0047	<0.0047	<0.0094	<0.0047	<0.0047	0.052	0.026	<0.0047	<0.0047	<0.0047	BRL
EB29 (0'-2.5')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	0.008	0.006	<0.0043	<0.0043	<0.0043	BRL
EB29 (7.5'-10')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	4.1	0.078	<0.0043	<0.0043	<0.0043	BRL
EB30 (0'-2.5')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	0.049	0.010	<0.0043	<0.0043	<0.0043	BRL
EB30 (7.5'-10')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	7.8	0.150	<0.0043	<0.0043	<0.0043	BRL
EB31 (0'-2.5')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	0.19	0.05	<0.0043	<0.0043	<0.0043	BRL
EB31 (12.5'-15')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	4.5	0.30	<0.0043	<0.0043	<0.0043	BRL
EB32 (0'-2.5')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	5.3	3.0	<0.0043	<0.0043	<0.0043	BRL
EB32 (12.5'-15')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	10.1	0.69	<0.0043	<0.0043	<0.0043	BRL
EB33 (0'-2.5')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	0.23	0.12	<0.0043	<0.0043	<0.0043	BRL
EB33(12.5'-15')	7/26/2017	<0.0043	<0.0043	<0.0086	<0.0043	<0.0043	5.1	0.42	<0.0043	<0.0043	<0.0043	BRL

Notes

BOLD	= Constituent detected above Laboratory Reporting Limit	IDEML = Indiana Department of Environmental Management
BOLD	= Constituent detected above IDEM RCG Residential DCSL's	RCG = Remediation Closure Guide
BOLD	= Constituent detected above IDEM RCG Industrial DCSL's	DCSL = Direct Contact Screening Level
BOLD	= Constituent detected above IDEM RCG Excavation DCSL's	MTGSL = Migration to Groundwater Screening Level
BOLD	= Constituent detected above IDEM RCG Residential MTGSL's	NE = No Screening Level Established for Constituent
		BRL - Below Laboratory Reporting Limit

All results reported in milligrams per kilogram (mg/kg)

Table 4
Groundwater Vertical Profiling Analytical Results
Hurricane Road Industrial Development / Former Houghland
Tomato Cannery
1130 East Eastview Drive
Franklin, Indiana
Patriot Project Number 17-0995-01E

Sample Identification	Date Collected	Tetrachloroethene	Trichloroethene	All Remaining VOCs
PB 40 (6-10)	07/26/2017	259	204	BRL
PB 40 (15-19)	07/26/2017	274	190	BRL
PB 40 (15-19) Duplicate	07/26/2017	280	177	BRL
PB 40 (29-33)	07/26/2017	11.9	5.4	BRL
Trip Blank	07/26/2017	<5.0	<5.0	BRL
PB 41 (15-20)	07/28/2017	22.5	64.5	BRL
PB 41 (24-28)	07/28/2017	18.4	53.4	BRL
PB 41 (30-34)	07/28/2017	18.4	21.1	BRL
Trip Blank	07/28/2017	<5.0	<5.0	BRL
IDEML RCG Residential TWSL's		5	5	Varies
IDEML RCG Residential VESL's		110	9.1	Varies
IDEML RCG Industrial VESL's		470	38	Varies

Notes

BOLD	= Constituent detected above Laboratory Reporting Limit
BOLD	= Constituent detected above IDEML RCG Residential TWSL's
BOLD	= Constituent detected above IDEML RCG Residential VESL's
BOLD	= Constituent detected above IDEML RCG Industrial VESL's

All results reported in micrograms per liter (ug/L)

NE = No Screening Level Established for Constituent

NA = Sample not Analyzed for Constituent

BRL - Below Laboratory Reporting Limit

TABLE 5
GROUNDWATER ANALYTICAL RESULTS
Former Houghland Tomato Cannery
1130 East Eastview Drive
Franklin, Indiana
Patriot Project Number 17-0995-01E

			cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
		IDEMLRCG Residential TWSL	70	100	5	5	2
		IDEMLRCG Residential VESL	NE	NE	110	9.1	2.1
		IDEMLRCG Industrial VESL	NE	NE	470	38	35
Sample ID	Date	Sampling Event	Patriot Monitoring Wells				
MW-10	9/24/2013	ISI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	3/7/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-11	3/5/2014	ISI	< 5.0	< 5.0	135	94.4	< 2.0
	9/24/2013	1Q2014	< 5.0	< 5.0	94.6	83.2	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	136	110	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	124	82.4	< 2.0
MW-12	3/5/2014	ISI	< 5.0	< 5.0	< 5.0	10.3	< 2.0
	3/3/2014	1Q2014	< 5.0	< 5.0	< 5.0	10.3	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	42.4	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-13	9/24/2013	ISI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	3/5/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-14	9/25/2013	ISI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	3/7/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	NS	NS	NS	NS	NS
	8/21/2017	ASI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-15	9/25/2013	ISI	< 5.0	< 5.0	< 5.0	26.3	< 2.0
	3/7/2014	1Q2014	< 5.0	< 5.0	< 5.0	16.8	< 2.0
	9/1/2016	FSI	NS	NS	NS	NS	NS
	8/21/2017	ASI	< 5.0	< 5.0	< 5.0	42.3	< 2.0
MW-16	9/25/2013	ISI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	3/7/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	NS	NS	NS	NS	NS
	8/21/2017	ASI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-17	9/25/2013	ISI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	3/7/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	NS	NS	NS	NS	NS
	8/21/2017	ASI	NS	NS	NS	NS	NS
MW-18	3/3/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	NS	NS	NS	NS	NS
	8/21/2017	ASI	NS	NS	NS	NS	NS
	3/3/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-19	9/1/2016	FSI	NS	NS	NS	NS	NS
	8/21/2017	ASI	NS	NS	NS	NS	NS
	3/3/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	NS	NS	NS	NS	NS
MW-20	8/21/2017	ASI	NS	NS	NS	NS	NS
	3/3/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0

			cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Sample ID	Date	Sampling Event	Patriot Monitoring Wells				
MW-21	3/3/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-22	3/5/2014	1Q2014	< 5.0	< 5.0	8.5	< 5.0	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	8.4	89.5	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	9.6	86.4	< 2.0
MW-23	3/3/2014	1Q2014	< 5.0	< 5.0	141	469	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	156	323	< 2.0
	9/1/2016 (DUP)	FSI	< 5.0	< 5.0	162	349	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	115	234	< 2.0
	8/21/2017 (DUP)	ASI	< 5.0	< 5.0	119	236	< 2.0
MW-24	3/6/2014	1Q2014	< 5.0	< 5.0	183	65.6	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	185	52.0	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	167	59.0	< 2.0
MW-25	3/5/2014	1Q2014	< 5.0	< 5.0	< 5.0	9.4	< 2.0
	9/1/2016	FSI	NS	NS	NS	NS	NS
	8/21/2017	ASI	NS	NS	NS	NS	NS
MW-26	3/5/2014	1Q2014	< 5.0	< 5.0	26.9	63.1	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	22.2	55.4	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	21.8	48.0	< 2.0
MW-27	3/5/2014	1Q2014	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-28	3/7/2014	1Q2014	19.3	< 5.0	< 5.0	< 5.0	< 2.0
	9/1/2016	FSI	NS	NS	NS	NS	NS
	8/22/2017	ASI	47.7	< 5.0	< 5.0	< 5.0	< 2.0
MW-29	3/7/2014	1Q2014	< 5.0	< 5.0	14.5	153	< 2.0
	9/1/2016	FSI	< 5.0	< 5.0	13.6	128	< 2.0
	8/21/2017	ASI	< 5.0	< 5.0	13.4	106	< 2.0
MW-30	9/1/2016	FSI	< 5.0	< 5.0	695	386	< 2.0
	8/22/2017	ASI	< 5.0	< 5.0	475	253	< 2.0
MW-31	8/22/2017	ASI	< 5.0	< 5.0	5.7	< 5.0	< 2.0
MW-32	8/21/2017	ASI	19.1	< 5.0	11.0	26.9	< 2.0
Sample ID	Date	Sampling Event	Ramboll Environ Monitoring Wells				
MW-1	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-2	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-3	9/1/2016	FSI	< 5.0	< 5.0	3.7	9.2	< 2.0
MW-4	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-5	9/1/2016	FSI	< 5.0	< 5.0	31.6	45.6	< 2.0
MW-6	9/1/2016	FSI	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0
MW-7	9/1/2016	FSI	< 5.0	< 5.0	42.8	53.5	< 2.0

Notes:**BOLD** = Constituent detected above Laboratory Reporting Limit**BOLD** = Constituent detected above IDEM RCG Residential TWSL's**BOLD** = Constituent detected above IDEM RCG Residential VESL's**BOLD** = Constituent detected above IDEM RCG Industrial VESL's

All results reported in micrograms per liter (ug/L)

NE = No Screening Level Established

NS = Not Sampled

TWSL = Tap Water Screening Level

VESL = Vapor Exposure Screening Level

IDEM = Indiana Department of Environmental Management

RCG = Remediation Closure Guide

APPENDIX D

GROUNDWATER SAMPLING DATA LOGS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-10

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-10
CASING ELEVATION: 738.15 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 14:20 PM

SAMPLE ID: MW-10

SCREEN DEPTH: 723.75 to 733.75 ft

EVACUATION DATA

DEPTH TO WATER: _____ 6.47 ft **WELL DEPTH:** _____ 14.71 ft
EVACUATION METHOD: Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing
PUMP INTAKE SET AT: _____ 12.00 ft **GALLONS PURGED:** _____ 1.10

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT: VOCs by 8260 **CONTAINER:** 3 x 40mL vials **PRESERVATIVE:** HCL

APPEARANCE: clear **ODOR:** none **COLOR:** clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-11

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-11
CASING ELEVATION: 731.85 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 12:50 PM

SAMPLE ID: MW-11

SCREEN DEPTH: 718.20 to 728.20 ft

EVACUATION DATA

DEPTH TO WATER:	8.45 ft	WELL DEPTH:	13.85 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	11.50 ft	GALLONS PURGED:	5.00

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	SI. Turbid	ODOR:	none	COLOR:	Brown to clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

PROJECT NO/TASK: 17-0995-01E
DATE: 8/22/2017
WELL ID: MW-12
CASING ELEVATION: 732.36 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 8:40

SAMPLE ID: MW-12

SCREEN DEPTH: 717.28 to 727.28 ft

EVACUATION DATA

DEPTH TO WATER:	10.90 ft	WELL DEPTH:	15.40 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	13.00 ft	GALLONS PURGED:	1.60

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	Sl. Turbid to Clear	ODOR:	none	COLOR:	Light Brown to Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-13

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-13
CASING ELEVATION: 740.45 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 16:50 PM

SAMPLE ID: MW-13

SCREEN DEPTH: 719.59 to 729.59 ft

EVACUATION DATA

DEPTH TO WATER: _____ 15.58 ft **WELL DEPTH:** _____ 21.30 ft
EVACUATION METHOD: Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing
PUMP INTAKE SET AT: _____ 19.00 ft **GALLONS PURGED:** _____ 1.60

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT: VOCs by 8260 **CONTAINER:** 3 x 40mL vials **PRESERVATIVE:** HCL

APPEARANCE: clear **ODOR:** none **COLOR:** clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-14

PROJECT NO/TASK: 17-0995-01E
DATE: 8/22/2017
WELL ID: MW-14
CASING ELEVATION: 734.15 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 16:05 PM

SAMPLE ID: MW-14

SCREEN DEPTH: 714.2 - 724.2 ft

EVACUATION DATA

DEPTH TO WATER:	13.30 ft	WELL DEPTH:	21.80 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	19.00 ft	GALLONS PURGED:	1.20

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	clear	ODOR:	none	COLOR:	clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-15

PROJECT NO/TASK: 17-0995-01E
DATE: 8/22/2017
WELL ID: MW-15
CASING ELEVATION: 735.30 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 12:55 PM

SAMPLE ID: MW-15

SCREEN DEPTH: 714.3 - 724.3 ft

EVACUATION DATA

DEPTH TO WATER: _____ 14.30 ft **WELL DEPTH:** _____ 21.80 ft
EVACUATION METHOD: Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing
PUMP INTAKE SET AT: _____ 19.00 ft **GALLONS PURGED:** _____ 1.80

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	clear	ODOR:	none	COLOR:	clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-16

PROJECT NO/TASK: 17-0995-01E
DATE: 8/22/2017
WELL ID: MW-16
CASING ELEVATION: 735.65 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 11:30 AM

SAMPLE ID: MW-16

SCREEN DEPTH: 715.7 - 725.7 ft

EVACUATION DATA

DEPTH TO WATER:	5.30 ft	WELL DEPTH:	20.50 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	17.00 ft	GALLONS PURGED:	1.00

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	clear	ODOR:	none	COLOR:	clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-20

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-20
CASING ELEVATION: 745.02 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling
START TIME: 12:55 PM
SAMPLE ID: MW-20
SCREEN DEPTH: 715.29 to 725.29 ft

EVACUATION DATA

DEPTH TO WATER:	6.71 ft	WELL DEPTH:	14.70 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	11.00 ft	GALLONS PURGED:	0.60

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	Clear	ODOR:	none	COLOR:	Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-21

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-21
CASING ELEVATION: 745.02 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 11:55 AM

SAMPLE ID: MW-21

SCREEN DEPTH: 715.59 to 725.59 ft

EVACUATION DATA

DEPTH TO WATER: _____ 6.99 ft **WELL DEPTH:** _____ 13.62 ft
EVACUATION METHOD: Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing
PUMP INTAKE SET AT: _____ 11.00 ft **GALLONS PURGED:** _____ 1.40

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT: VOCs by 8260 **CONTAINER:** 3 x 40mL vials **PRESERVATIVE:** HCL

APPEARANCE: Clear **ODOR:** none **COLOR:** Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-22

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-22
CASING ELEVATION: 745.02 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 9:55 AM

SAMPLE ID: MW-22

SCREEN DEPTH: 717.57 to 727.57 ft

EVACUATION DATA

DEPTH TO WATER:	14.07 ft	WELL DEPTH:	18.90 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	16.50 ft	GALLONS PURGED:	1.80

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	Turbid to Clear	ODOR:	none	COLOR:	Brown to Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-23

PROJECT NO/TASK: 17-0995-01E
DATE: 8/22/2017
WELL ID: MW-23
CASING ELEVATION: 739.78 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 15:25 PM

SAMPLE ID: MW-23

SCREEN DEPTH: 719.78 to 729.78 ft

EVACUATION DATA

DEPTH TO WATER: _____ 16.30 ft **WELL DEPTH:** _____ 20.00 ft
EVACUATION METHOD: Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing
PUMP INTAKE SET AT: _____ 18.00 ft **GALLONS PURGED:** _____ 1.40

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT: VOCs by 8260 **CONTAINER:** 3 x 40mL vials **PRESERVATIVE:** HCL

APPEARANCE: Clear **ODOR:** none **COLOR:** Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-24

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-17
CASING ELEVATION: 740.93 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 11:40 AM

SAMPLE ID: MW-17

SCREEN DEPTH: 719.13 to 729.13 ft

EVACUATION DATA

DEPTH TO WATER: _____ 17.23 ft **WELL DEPTH:** _____ 21.80 ft
EVACUATION METHOD: Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing
PUMP INTAKE SET AT: _____ 19.00 ft **GALLONS PURGED:** _____ 3.20

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	SI. Turbid to Clear	ODOR:	none	COLOR:	Light Brown to Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-26

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-26
CASING ELEVATION: 739.01 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 8:50 AM

SAMPLE ID: MW-26

SCREEN DEPTH: 716.41 to 726.41 ft

EVACUATION DATA

DEPTH TO WATER:	16.26 ft	WELL DEPTH:	22.90 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	20.00 ft	GALLONS PURGED:	0.80

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT: VOCs by 8260 **CONTAINER:** 3 x 40mL vials **PRESERVATIVE:** HCL

APPEARANCE: Sl. Turbid to Clear **ODOR:** none **COLOR:** Light Brown to Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-27

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-27
CASING ELEVATION: 740.06 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 13:10 PM

SAMPLE ID: MW-27

SCREEN DEPTH: 723.16 to 733.16 ft

EVACUATION DATA

DEPTH TO WATER:	8.87 ft	WELL DEPTH:	16.90 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	14.00 ft	GALLONS PURGED:	1.30

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	Sl. Turbid to Clear	ODOR:	none	COLOR:	Light Brown to Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-28

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-27
CASING ELEVATION: 740.06 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 10:45 AM

SAMPLE ID: MW-27

SCREEN DEPTH: 718.3 - 728.3 ft

EVACUATION DATA

DEPTH TO WATER: _____ 9.40 ft **WELL DEPTH:** _____ 21.30 ft
EVACUATION METHOD: Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing
PUMP INTAKE SET AT: _____ 18.00 ft **GALLONS PURGED:** _____ 1.00

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	SI. Turbid to Clear	ODOR:	none	COLOR:	Light Brown to Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-29

PROJECT NO/TASK: 17-0995-01E
DATE: 8/21/2017
WELL ID: MW-29
CASING ELEVATION: 732.96 ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 13:50 PM

SAMPLE ID: MW-29

SCREEN DEPTH: 715.36 to 725.36 ft

EVACUATION DATA

DEPTH TO WATER: _____ 11.43 ft **WELL DEPTH:** _____ 17.60 ft
EVACUATION METHOD: Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing
PUMP INTAKE SET AT: _____ 15.00 ft **GALLONS PURGED:** _____ 1.60

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	Clear	ODOR:	none	COLOR:	Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-30

PROJECT NO/TASK: 17-0995-01E
DATE: 8/22/2017
WELL ID: MW-30
CASING ELEVATION: N/A ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 13:00 PM

SAMPLE ID: MW-30

SCREEN DEPTH: N/A ft

EVACUATION DATA

DEPTH TO WATER: 10.66 ft **WELL DEPTH:** 14.50 ft
EVACUATION METHOD: Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing
PUMP INTAKE SET AT: 12.00 ft **GALLONS PURGED:** 1.50

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	Clear	ODOR:	none	COLOR:	Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-31

PROJECT NO/TASK: 17-0995-01E
DATE: 8/22/2017
WELL ID: MW-30
CASING ELEVATION: N/A ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 15:15 PM

SAMPLE ID: MW-30

SCREEN DEPTH: N/A ft

EVACUATION DATA

DEPTH TO WATER:	24.09 ft	WELL DEPTH:	30.00 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	27.00 ft	GALLONS PURGED:	4.00

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	Clear	ODOR:	none	COLOR:	Clear

FIELD PARAMETERS



GROUNDWATER WELL SAMPLING LOG

PROJECT NAME: Former Houghland Tomato Cannery

Well ID: MW-32

PROJECT NO/TASK: 17-0995-01E
DATE: 8/22/2017
WELL ID: MW-30
CASING ELEVATION: N/A ft
SAMPLING PERSONNEL:

EVENT: Low Flow Sampling

START TIME: 15:25 PM

SAMPLE ID: MW-30

SCREEN DEPTH: N/A ft

EVACUATION DATA

DEPTH TO WATER:	16.67 ft	WELL DEPTH:	33.00 ft
EVACUATION METHOD:	Micro-purge evacuation using a stainless steel Monsoon 12V submersible pump with speed controls and well specific polyethylene tubing		
PUMP INTAKE SET AT:	30.00 ft	GALLONS PURGED:	2.40

SAMPLING DATA

SAMPLING METHOD: Micro-purge evacuation and sample

CONSTITUENT:	VOCs by 8260	CONTAINER:	3 x 40mL vials	PRESERVATIVE:	HCL
APPEARANCE:	Clear	ODOR:	none	COLOR:	Clear

FIELD PARAMETERS

APPENDIX E

SOIL LABORATORY ANALYTICAL REPORT



Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

August 07, 2017

Mr. Mike Casper
Patriot Engineering
6150 E. 75th St.
Indianapolis, IN 46250

RE: Project: Houghland Add. Investigation
Pace Project No.: 50176347

Dear Mr. Casper:

Enclosed are the analytical results for sample(s) received by the laboratory on July 27, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive ink that reads "Tina Sayer".

Tina Sayer
tina.sayer@pacelabs.com
(317)228-3100
Project Manager

Enclosures

cc: Mr. James Cody, Patriot Engineering



REPORT OF LABORATORY ANALYSIS

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Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Houghland Add. Investigation
Pace Project No.: 50176347

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 003971
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WV Certification #: 98019

Ohio VAP Certification #: CL-0065
Oklahoma Certification #: 2016-075
Texas Certification #: T104704355-16-10
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

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SAMPLE SUMMARY

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50176347001	PB 34 (0-2)	Solid	07/26/17 08:50	07/27/17 09:47
50176347002	PB 34 (13-15)	Solid	07/26/17 08:55	07/27/17 09:47
50176347003	PB 35 (0-2)	Solid	07/26/17 09:30	07/27/17 09:47
50176347004	PB 35 (13-15)	Solid	07/26/17 09:35	07/27/17 09:47
50176347005	Dup	Solid	07/26/17 08:00	07/27/17 09:47
50176347006	PB 36 (0-2)	Solid	07/26/17 10:35	07/27/17 09:47
50176347007	PB 36 (8-10)	Solid	07/26/17 10:40	07/27/17 09:47
50176347008	PB 37 (0-2)	Solid	07/26/17 11:20	07/27/17 09:47
50176347009	PB 37 (8-10)	Solid	07/26/17 11:25	07/27/17 09:47
50176347010	PB 40 (29-33)	Water	07/26/17 14:55	07/27/17 09:47
50176347011	PB 40 (15-19)	Water	07/26/17 15:05	07/27/17 09:47
50176347012	Dup GW	Water	07/26/17 08:00	07/27/17 09:47
50176347013	PB 40 (6-10)	Water	07/26/17 15:20	07/27/17 09:47
50176347014	Trip Blank	Water	07/26/17 08:00	07/27/17 09:47

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SAMPLE ANALYTE COUNT

Project: Houghland Add. Investigation
Pace Project No.: 50176347

Lab ID	Sample ID	Method	Analysts	Analytes Reported
50176347001	PB 34 (0-2)	EPA 8260	ALA	75
		SM 2540G	WDB	1
50176347002	PB 34 (13-15)	EPA 8260	ALA	75
		SM 2540G	WDB	1
50176347003	PB 35 (0-2)	EPA 8260	ALA	75
		SM 2540G	WDB	1
50176347004	PB 35 (13-15)	EPA 8260	ALA	75
		SM 2540G	WDB	1
50176347005	Dup	EPA 8260	ALA	75
		SM 2540G	WDB	1
50176347006	PB 36 (0-2)	EPA 8260	ALA	75
		SM 2540G	WDB	1
50176347007	PB 36 (8-10)	EPA 8260	ALA	75
		SM 2540G	WDB	1
50176347008	PB 37 (0-2)	EPA 8260	ALA	75
		SM 2540G	WDB	1
50176347009	PB 37 (8-10)	EPA 8260	ALA	75
		SM 2540G	WDB	1
50176347010	PB 40 (29-33)	EPA 8260	DAE	75
50176347011	PB 40 (15-19)	EPA 8260	CAP, DAE	75
50176347012	Dup GW	EPA 8260	CAP, DAE	75
50176347013	PB 40 (6-10)	EPA 8260	CAP	75
50176347014	Trip Blank	EPA 8260	CAP	75

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SUMMARY OF DETECTION

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50176347001	PB 34 (0-2)					
EPA 8260	Tetrachloroethene	0.028	mg/kg	0.0046	07/31/17 20:10	
EPA 8260	Trichloroethene	0.014	mg/kg	0.0046	07/31/17 20:10	
SM 2540G	Percent Moisture	14.7	%	0.10	08/04/17 08:42	
50176347002	PB 34 (13-15)					
EPA 8260	Tetrachloroethene	1.9	mg/kg	0.28	08/01/17 18:57	
EPA 8260	Trichloroethene	0.18	mg/kg	0.0050	07/31/17 20:47	
SM 2540G	Percent Moisture	11.7	%	0.10	08/04/17 08:42	
50176347003	PB 35 (0-2)					
EPA 8260	Tetrachloroethene	0.029	mg/kg	0.0053	07/31/17 21:25	
EPA 8260	Trichloroethene	0.0095	mg/kg	0.0053	07/31/17 21:25	
SM 2540G	Percent Moisture	14.9	%	0.10	08/04/17 08:42	
50176347004	PB 35 (13-15)					
EPA 8260	Tetrachloroethene	1.7	mg/kg	0.23	08/01/17 19:35	
EPA 8260	Trichloroethene	0.14	mg/kg	0.0044	07/31/17 22:03	
SM 2540G	Percent Moisture	5.4	%	0.10	08/04/17 08:43	
50176347005	Dup					
EPA 8260	Tetrachloroethene	1.8	mg/kg	0.24	08/01/17 20:13	
EPA 8260	Trichloroethene	0.093	mg/kg	0.0046	07/31/17 22:40	
SM 2540G	Percent Moisture	3.5	%	0.10	08/04/17 08:43	
50176347006	PB 36 (0-2)					
SM 2540G	Percent Moisture	19.3	%	0.10	08/04/17 08:43	
50176347007	PB 36 (8-10)					
EPA 8260	Tetrachloroethene	1.5	mg/kg	0.24	08/01/17 20:50	
EPA 8260	Trichloroethene	0.067	mg/kg	0.0047	07/31/17 23:55	
SM 2540G	Percent Moisture	3.8	%	0.10	08/04/17 08:43	
50176347008	PB 37 (0-2)					
EPA 8260	Tetrachloroethene	0.030	mg/kg	0.0055	08/01/17 21:28	
EPA 8260	Trichloroethene	0.0061	mg/kg	0.0055	08/01/17 21:28	
SM 2540G	Percent Moisture	15.4	%	0.10	08/04/17 08:43	
50176347009	PB 37 (8-10)					
EPA 8260	Tetrachloroethene	4.2	mg/kg	0.23	08/01/17 22:43	
EPA 8260	Trichloroethene	0.17	mg/kg	0.0048	08/01/17 22:06	
SM 2540G	Percent Moisture	4.6	%	0.10	08/04/17 08:43	
50176347010	PB 40 (29-33)					
EPA 8260	Tetrachloroethene	11.9	ug/L	5.0	07/28/17 16:13	
EPA 8260	Trichloroethene	5.4	ug/L	5.0	07/28/17 16:13	
50176347011	PB 40 (15-19)					
EPA 8260	Tetrachloroethene	274	ug/L	25.0	07/31/17 12:57	
EPA 8260	Trichloroethene	190	ug/L	5.0	07/28/17 16:48	

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SUMMARY OF DETECTION

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50176347012	Dup GW					
EPA 8260	Tetrachloroethene	280	ug/L	25.0	07/31/17 13:32	
EPA 8260	Trichloroethene	177	ug/L	5.0	07/28/17 17:23	
50176347013	PB 40 (6-10)					
EPA 8260	Tetrachloroethene	259	ug/L	5.0	07/29/17 03:55	
EPA 8260	Trichloroethene	204	ug/L	5.0	07/29/17 03:55	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 34 (0-2) Lab ID: 50176347001 Collected: 07/26/17 08:50 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.091	1		07/31/17 20:10	67-64-1	
Acrolein	ND	mg/kg	0.091	1		07/31/17 20:10	107-02-8	
Acrylonitrile	ND	mg/kg	0.091	1		07/31/17 20:10	107-13-1	
Benzene	ND	mg/kg	0.0046	1		07/31/17 20:10	71-43-2	
Bromobenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	108-86-1	
Bromoform	ND	mg/kg	0.0046	1		07/31/17 20:10	75-25-2	
Bromomethane	ND	mg/kg	0.0046	1		07/31/17 20:10	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		07/31/17 20:10	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	98-06-6	
Carbon disulfide	ND	mg/kg	0.0091	1		07/31/17 20:10	75-15-0	L2
Carbon tetrachloride	ND	mg/kg	0.0046	1		07/31/17 20:10	56-23-5	
Chlorobenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	108-90-7	
Chloroethane	ND	mg/kg	0.0046	1		07/31/17 20:10	75-00-3	
Chloroform	ND	mg/kg	0.0046	1		07/31/17 20:10	67-66-3	
Chloromethane	ND	mg/kg	0.0046	1		07/31/17 20:10	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0046	1		07/31/17 20:10	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0046	1		07/31/17 20:10	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0046	1		07/31/17 20:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0046	1		07/31/17 20:10	106-93-4	
Dibromomethane	ND	mg/kg	0.0046	1		07/31/17 20:10	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.091	1		07/31/17 20:10	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0046	1		07/31/17 20:10	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0046	1		07/31/17 20:10	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0046	1		07/31/17 20:10	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0046	1		07/31/17 20:10	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0046	1		07/31/17 20:10	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0046	1		07/31/17 20:10	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0046	1		07/31/17 20:10	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0046	1		07/31/17 20:10	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0046	1		07/31/17 20:10	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0046	1		07/31/17 20:10	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0046	1		07/31/17 20:10	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0046	1		07/31/17 20:10	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.091	1		07/31/17 20:10	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0046	1		07/31/17 20:10	87-68-3	
n-Hexane	ND	mg/kg	0.0046	1		07/31/17 20:10	110-54-3	
2-Hexanone	ND	mg/kg	0.091	1		07/31/17 20:10	591-78-6	
Iodomethane	ND	mg/kg	0.091	1		07/31/17 20:10	74-88-4	

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 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 34 (0-2) Lab ID: 50176347001 Collected: 07/26/17 08:50 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0046	1		07/31/17 20:10	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0046	1		07/31/17 20:10	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		07/31/17 20:10	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.0091	1		07/31/17 20:10	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.0091	1		07/31/17 20:10	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		07/31/17 20:10	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0046	1		07/31/17 20:10	1634-04-4	
Naphthalene	ND	mg/kg	0.0046	1		07/31/17 20:10	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	103-65-1	
Styrene	ND	mg/kg	0.0046	1		07/31/17 20:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0046	1		07/31/17 20:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0046	1		07/31/17 20:10	79-34-5	
Tetrachloroethene	0.028	mg/kg	0.0046	1		07/31/17 20:10	127-18-4	
Toluene	ND	mg/kg	0.0046	1		07/31/17 20:10	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0046	1		07/31/17 20:10	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0046	1		07/31/17 20:10	79-00-5	
Trichloroethene	0.014	mg/kg	0.0046	1		07/31/17 20:10	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0046	1		07/31/17 20:10	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0046	1		07/31/17 20:10	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0046	1		07/31/17 20:10	108-67-8	
Vinyl acetate	ND	mg/kg	0.091	1		07/31/17 20:10	108-05-4	
Vinyl chloride	ND	mg/kg	0.0046	1		07/31/17 20:10	75-01-4	
Xylene (Total)	ND	mg/kg	0.0091	1		07/31/17 20:10	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	107	%.	69-136	1		07/31/17 20:10	1868-53-7	
Toluene-d8 (S)	106	%.	64-150	1		07/31/17 20:10	2037-26-5	
4-Bromofluorobenzene (S)	87	%.	51-142	1		07/31/17 20:10	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	14.7	%	0.10	1		08/04/17 08:42		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 34 (13-15) Lab ID: 50176347002 Collected: 07/26/17 08:55 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.10	1		07/31/17 20:47	67-64-1	
Acrolein	ND	mg/kg	0.10	1		07/31/17 20:47	107-02-8	
Acrylonitrile	ND	mg/kg	0.10	1		07/31/17 20:47	107-13-1	
Benzene	ND	mg/kg	0.0050	1		07/31/17 20:47	71-43-2	
Bromobenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	108-86-1	
Bromoform	ND	mg/kg	0.0050	1		07/31/17 20:47	74-97-5	
Bromochloromethane	ND	mg/kg	0.0050	1		07/31/17 20:47	75-27-4	
Bromodichloromethane	ND	mg/kg	0.0050	1		07/31/17 20:47	75-25-2	
Bromoform	ND	mg/kg	0.0050	1		07/31/17 20:47	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.025	1		07/31/17 20:47	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	98-06-6	
Carbon disulfide	ND	mg/kg	0.010	1		07/31/17 20:47	75-15-0	L2
Carbon tetrachloride	ND	mg/kg	0.0050	1		07/31/17 20:47	56-23-5	
Chlorobenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	108-90-7	
Chloroethane	ND	mg/kg	0.0050	1		07/31/17 20:47	75-00-3	
Chloroform	ND	mg/kg	0.0050	1		07/31/17 20:47	67-66-3	
Chloromethane	ND	mg/kg	0.0050	1		07/31/17 20:47	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0050	1		07/31/17 20:47	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0050	1		07/31/17 20:47	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0050	1		07/31/17 20:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0050	1		07/31/17 20:47	106-93-4	
Dibromomethane	ND	mg/kg	0.0050	1		07/31/17 20:47	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.10	1		07/31/17 20:47	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0050	1		07/31/17 20:47	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0050	1		07/31/17 20:47	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0050	1		07/31/17 20:47	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0050	1		07/31/17 20:47	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0050	1		07/31/17 20:47	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0050	1		07/31/17 20:47	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0050	1		07/31/17 20:47	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0050	1		07/31/17 20:47	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0050	1		07/31/17 20:47	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0050	1		07/31/17 20:47	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0050	1		07/31/17 20:47	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0050	1		07/31/17 20:47	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.10	1		07/31/17 20:47	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0050	1		07/31/17 20:47	87-68-3	
n-Hexane	ND	mg/kg	0.0050	1		07/31/17 20:47	110-54-3	
2-Hexanone	ND	mg/kg	0.10	1		07/31/17 20:47	591-78-6	
Iodomethane	ND	mg/kg	0.10	1		07/31/17 20:47	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 34 (13-15) Lab ID: 50176347002 Collected: 07/26/17 08:55 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0050	1		07/31/17 20:47	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0050	1		07/31/17 20:47	99-87-6	
Methylene Chloride	ND	mg/kg	0.020	1		07/31/17 20:47	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.010	1		07/31/17 20:47	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.010	1		07/31/17 20:47	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.025	1		07/31/17 20:47	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0050	1		07/31/17 20:47	1634-04-4	
Naphthalene	ND	mg/kg	0.0050	1		07/31/17 20:47	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	103-65-1	
Styrene	ND	mg/kg	0.0050	1		07/31/17 20:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0050	1		07/31/17 20:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0050	1		07/31/17 20:47	79-34-5	
Tetrachloroethene	1.9	mg/kg	0.28	50		08/01/17 18:57	127-18-4	
Toluene	ND	mg/kg	0.0050	1		07/31/17 20:47	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0050	1		07/31/17 20:47	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0050	1		07/31/17 20:47	79-00-5	
Trichloroethene	0.18	mg/kg	0.0050	1		07/31/17 20:47	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0050	1		07/31/17 20:47	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0050	1		07/31/17 20:47	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	1		07/31/17 20:47	108-67-8	
Vinyl acetate	ND	mg/kg	0.10	1		07/31/17 20:47	108-05-4	
Vinyl chloride	ND	mg/kg	0.0050	1		07/31/17 20:47	75-01-4	
Xylene (Total)	ND	mg/kg	0.010	1		07/31/17 20:47	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%.	69-136	1		07/31/17 20:47	1868-53-7	
Toluene-d8 (S)	110	%.	64-150	1		07/31/17 20:47	2037-26-5	
4-Bromofluorobenzene (S)	83	%.	51-142	1		07/31/17 20:47	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	11.7	%	0.10	1		08/04/17 08:42		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 35 (0-2) Lab ID: 50176347003 Collected: 07/26/17 09:30 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.11	1		07/31/17 21:25	67-64-1	
Acrolein	ND	mg/kg	0.11	1		07/31/17 21:25	107-02-8	
Acrylonitrile	ND	mg/kg	0.11	1		07/31/17 21:25	107-13-1	
Benzene	ND	mg/kg	0.0053	1		07/31/17 21:25	71-43-2	
Bromobenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	108-86-1	
Bromoform	ND	mg/kg	0.0053	1		07/31/17 21:25	75-25-2	
Bromomethane	ND	mg/kg	0.0053	1		07/31/17 21:25	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.026	1		07/31/17 21:25	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	98-06-6	
Carbon disulfide	ND	mg/kg	0.011	1		07/31/17 21:25	75-15-0	L2
Carbon tetrachloride	ND	mg/kg	0.0053	1		07/31/17 21:25	56-23-5	
Chlorobenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	108-90-7	
Chloroethane	ND	mg/kg	0.0053	1		07/31/17 21:25	75-00-3	
Chloroform	ND	mg/kg	0.0053	1		07/31/17 21:25	67-66-3	
Chloromethane	ND	mg/kg	0.0053	1		07/31/17 21:25	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0053	1		07/31/17 21:25	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0053	1		07/31/17 21:25	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0053	1		07/31/17 21:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0053	1		07/31/17 21:25	106-93-4	
Dibromomethane	ND	mg/kg	0.0053	1		07/31/17 21:25	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.11	1		07/31/17 21:25	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0053	1		07/31/17 21:25	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0053	1		07/31/17 21:25	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0053	1		07/31/17 21:25	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0053	1		07/31/17 21:25	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0053	1		07/31/17 21:25	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0053	1		07/31/17 21:25	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0053	1		07/31/17 21:25	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0053	1		07/31/17 21:25	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0053	1		07/31/17 21:25	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0053	1		07/31/17 21:25	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0053	1		07/31/17 21:25	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0053	1		07/31/17 21:25	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.11	1		07/31/17 21:25	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0053	1		07/31/17 21:25	87-68-3	
n-Hexane	ND	mg/kg	0.0053	1		07/31/17 21:25	110-54-3	
2-Hexanone	ND	mg/kg	0.11	1		07/31/17 21:25	591-78-6	
Iodomethane	ND	mg/kg	0.11	1		07/31/17 21:25	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 35 (0-2) Lab ID: 50176347003 Collected: 07/26/17 09:30 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0053	1		07/31/17 21:25	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0053	1		07/31/17 21:25	99-87-6	
Methylene Chloride	ND	mg/kg	0.021	1		07/31/17 21:25	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.011	1		07/31/17 21:25	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.011	1		07/31/17 21:25	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.026	1		07/31/17 21:25	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0053	1		07/31/17 21:25	1634-04-4	
Naphthalene	ND	mg/kg	0.0053	1		07/31/17 21:25	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	103-65-1	
Styrene	ND	mg/kg	0.0053	1		07/31/17 21:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0053	1		07/31/17 21:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0053	1		07/31/17 21:25	79-34-5	
Tetrachloroethene	0.029	mg/kg	0.0053	1		07/31/17 21:25	127-18-4	
Toluene	ND	mg/kg	0.0053	1		07/31/17 21:25	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0053	1		07/31/17 21:25	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0053	1		07/31/17 21:25	79-00-5	
Trichloroethene	0.0095	mg/kg	0.0053	1		07/31/17 21:25	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0053	1		07/31/17 21:25	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0053	1		07/31/17 21:25	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0053	1		07/31/17 21:25	108-67-8	
Vinyl acetate	ND	mg/kg	0.11	1		07/31/17 21:25	108-05-4	
Vinyl chloride	ND	mg/kg	0.0053	1		07/31/17 21:25	75-01-4	
Xylene (Total)	ND	mg/kg	0.011	1		07/31/17 21:25	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	107	%.	69-136	1		07/31/17 21:25	1868-53-7	
Toluene-d8 (S)	110	%.	64-150	1		07/31/17 21:25	2037-26-5	
4-Bromofluorobenzene (S)	79	%.	51-142	1		07/31/17 21:25	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	14.9	%	0.10	1		08/04/17 08:42		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 35 (13-15) Lab ID: 50176347004 Collected: 07/26/17 09:35 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.089	1		07/31/17 22:03	67-64-1	
Acrolein	ND	mg/kg	0.089	1		07/31/17 22:03	107-02-8	
Acrylonitrile	ND	mg/kg	0.089	1		07/31/17 22:03	107-13-1	
Benzene	ND	mg/kg	0.0044	1		07/31/17 22:03	71-43-2	
Bromobenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	108-86-1	
Bromoform	ND	mg/kg	0.0044	1		07/31/17 22:03	75-25-2	
Bromomethane	ND	mg/kg	0.0044	1		07/31/17 22:03	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.022	1		07/31/17 22:03	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	98-06-6	
Carbon disulfide	ND	mg/kg	0.0089	1		07/31/17 22:03	75-15-0	L2
Carbon tetrachloride	ND	mg/kg	0.0044	1		07/31/17 22:03	56-23-5	
Chlorobenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	108-90-7	
Chloroethane	ND	mg/kg	0.0044	1		07/31/17 22:03	75-00-3	
Chloroform	ND	mg/kg	0.0044	1		07/31/17 22:03	67-66-3	
Chloromethane	ND	mg/kg	0.0044	1		07/31/17 22:03	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0044	1		07/31/17 22:03	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0044	1		07/31/17 22:03	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0044	1		07/31/17 22:03	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0044	1		07/31/17 22:03	106-93-4	
Dibromomethane	ND	mg/kg	0.0044	1		07/31/17 22:03	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.089	1		07/31/17 22:03	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0044	1		07/31/17 22:03	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0044	1		07/31/17 22:03	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0044	1		07/31/17 22:03	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0044	1		07/31/17 22:03	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0044	1		07/31/17 22:03	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0044	1		07/31/17 22:03	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0044	1		07/31/17 22:03	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0044	1		07/31/17 22:03	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0044	1		07/31/17 22:03	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0044	1		07/31/17 22:03	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0044	1		07/31/17 22:03	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0044	1		07/31/17 22:03	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.089	1		07/31/17 22:03	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0044	1		07/31/17 22:03	87-68-3	
n-Hexane	ND	mg/kg	0.0044	1		07/31/17 22:03	110-54-3	
2-Hexanone	ND	mg/kg	0.089	1		07/31/17 22:03	591-78-6	
Iodomethane	ND	mg/kg	0.089	1		07/31/17 22:03	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 35 (13-15) Lab ID: 50176347004 Collected: 07/26/17 09:35 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0044	1		07/31/17 22:03	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0044	1		07/31/17 22:03	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		07/31/17 22:03	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.0089	1		07/31/17 22:03	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.0089	1		07/31/17 22:03	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.022	1		07/31/17 22:03	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0044	1		07/31/17 22:03	1634-04-4	
Naphthalene	ND	mg/kg	0.0044	1		07/31/17 22:03	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	103-65-1	
Styrene	ND	mg/kg	0.0044	1		07/31/17 22:03	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0044	1		07/31/17 22:03	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0044	1		07/31/17 22:03	79-34-5	
Tetrachloroethene	1.7	mg/kg	0.23	50		08/01/17 19:35	127-18-4	
Toluene	ND	mg/kg	0.0044	1		07/31/17 22:03	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0044	1		07/31/17 22:03	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0044	1		07/31/17 22:03	79-00-5	
Trichloroethene	0.14	mg/kg	0.0044	1		07/31/17 22:03	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0044	1		07/31/17 22:03	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0044	1		07/31/17 22:03	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0044	1		07/31/17 22:03	108-67-8	
Vinyl acetate	ND	mg/kg	0.089	1		07/31/17 22:03	108-05-4	
Vinyl chloride	ND	mg/kg	0.0044	1		07/31/17 22:03	75-01-4	
Xylene (Total)	ND	mg/kg	0.0089	1		07/31/17 22:03	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%.	69-136	1		07/31/17 22:03	1868-53-7	
Toluene-d8 (S)	113	%.	64-150	1		07/31/17 22:03	2037-26-5	
4-Bromofluorobenzene (S)	80	%.	51-142	1		07/31/17 22:03	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	5.4	%	0.10	1		08/04/17 08:43		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: Dup Lab ID: 50176347005 Collected: 07/26/17 08:00 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.091	1		07/31/17 22:40	67-64-1	
Acrolein	ND	mg/kg	0.091	1		07/31/17 22:40	107-02-8	
Acrylonitrile	ND	mg/kg	0.091	1		07/31/17 22:40	107-13-1	
Benzene	ND	mg/kg	0.0046	1		07/31/17 22:40	71-43-2	
Bromobenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	108-86-1	
Bromoform	ND	mg/kg	0.0046	1		07/31/17 22:40	75-25-2	
Bromomethane	ND	mg/kg	0.0046	1		07/31/17 22:40	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		07/31/17 22:40	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	98-06-6	
Carbon disulfide	ND	mg/kg	0.0091	1		07/31/17 22:40	75-15-0	L2
Carbon tetrachloride	ND	mg/kg	0.0046	1		07/31/17 22:40	56-23-5	
Chlorobenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	108-90-7	
Chloroethane	ND	mg/kg	0.0046	1		07/31/17 22:40	75-00-3	
Chloroform	ND	mg/kg	0.0046	1		07/31/17 22:40	67-66-3	
Chloromethane	ND	mg/kg	0.0046	1		07/31/17 22:40	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0046	1		07/31/17 22:40	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0046	1		07/31/17 22:40	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0046	1		07/31/17 22:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0046	1		07/31/17 22:40	106-93-4	
Dibromomethane	ND	mg/kg	0.0046	1		07/31/17 22:40	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.091	1		07/31/17 22:40	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0046	1		07/31/17 22:40	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0046	1		07/31/17 22:40	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0046	1		07/31/17 22:40	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0046	1		07/31/17 22:40	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0046	1		07/31/17 22:40	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0046	1		07/31/17 22:40	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0046	1		07/31/17 22:40	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0046	1		07/31/17 22:40	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0046	1		07/31/17 22:40	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0046	1		07/31/17 22:40	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0046	1		07/31/17 22:40	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0046	1		07/31/17 22:40	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.091	1		07/31/17 22:40	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0046	1		07/31/17 22:40	87-68-3	
n-Hexane	ND	mg/kg	0.0046	1		07/31/17 22:40	110-54-3	
2-Hexanone	ND	mg/kg	0.091	1		07/31/17 22:40	591-78-6	
Iodomethane	ND	mg/kg	0.091	1		07/31/17 22:40	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: Dup Lab ID: 50176347005 Collected: 07/26/17 08:00 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0046	1		07/31/17 22:40	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0046	1		07/31/17 22:40	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		07/31/17 22:40	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.0091	1		07/31/17 22:40	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.0091	1		07/31/17 22:40	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		07/31/17 22:40	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0046	1		07/31/17 22:40	1634-04-4	
Naphthalene	ND	mg/kg	0.0046	1		07/31/17 22:40	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	103-65-1	
Styrene	ND	mg/kg	0.0046	1		07/31/17 22:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0046	1		07/31/17 22:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0046	1		07/31/17 22:40	79-34-5	
Tetrachloroethene	1.8	mg/kg	0.24	50		08/01/17 20:13	127-18-4	
Toluene	ND	mg/kg	0.0046	1		07/31/17 22:40	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0046	1		07/31/17 22:40	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0046	1		07/31/17 22:40	79-00-5	
Trichloroethene	0.093	mg/kg	0.0046	1		07/31/17 22:40	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0046	1		07/31/17 22:40	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0046	1		07/31/17 22:40	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0046	1		07/31/17 22:40	108-67-8	
Vinyl acetate	ND	mg/kg	0.091	1		07/31/17 22:40	108-05-4	
Vinyl chloride	ND	mg/kg	0.0046	1		07/31/17 22:40	75-01-4	
Xylene (Total)	ND	mg/kg	0.0091	1		07/31/17 22:40	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%.	69-136	1		07/31/17 22:40	1868-53-7	
Toluene-d8 (S)	108	%.	64-150	1		07/31/17 22:40	2037-26-5	
4-Bromofluorobenzene (S)	82	%.	51-142	1		07/31/17 22:40	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	3.5	%	0.10	1		08/04/17 08:43		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 36 (0-2) Lab ID: 50176347006 Collected: 07/26/17 10:35 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.12	1		07/31/17 23:18	67-64-1	
Acrolein	ND	mg/kg	0.12	1		07/31/17 23:18	107-02-8	
Acrylonitrile	ND	mg/kg	0.12	1		07/31/17 23:18	107-13-1	
Benzene	ND	mg/kg	0.0058	1		07/31/17 23:18	71-43-2	
Bromobenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	108-86-1	
Bromoform	ND	mg/kg	0.0058	1		07/31/17 23:18	75-27-4	
Bromomethane	ND	mg/kg	0.0058	1		07/31/17 23:18	74-97-5	
2-Butanone (MEK)	ND	mg/kg	0.029	1		07/31/17 23:18	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	98-06-6	
Carbon disulfide	ND	mg/kg	0.012	1		07/31/17 23:18	75-15-0	L2
Carbon tetrachloride	ND	mg/kg	0.0058	1		07/31/17 23:18	56-23-5	
Chlorobenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	108-90-7	
Chloroethane	ND	mg/kg	0.0058	1		07/31/17 23:18	75-00-3	
Chloroform	ND	mg/kg	0.0058	1		07/31/17 23:18	67-66-3	
Chloromethane	ND	mg/kg	0.0058	1		07/31/17 23:18	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0058	1		07/31/17 23:18	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0058	1		07/31/17 23:18	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0058	1		07/31/17 23:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0058	1		07/31/17 23:18	106-93-4	
Dibromomethane	ND	mg/kg	0.0058	1		07/31/17 23:18	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.12	1		07/31/17 23:18	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0058	1		07/31/17 23:18	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0058	1		07/31/17 23:18	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0058	1		07/31/17 23:18	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0058	1		07/31/17 23:18	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0058	1		07/31/17 23:18	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0058	1		07/31/17 23:18	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0058	1		07/31/17 23:18	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0058	1		07/31/17 23:18	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0058	1		07/31/17 23:18	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0058	1		07/31/17 23:18	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0058	1		07/31/17 23:18	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0058	1		07/31/17 23:18	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.12	1		07/31/17 23:18	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0058	1		07/31/17 23:18	87-68-3	
n-Hexane	ND	mg/kg	0.0058	1		07/31/17 23:18	110-54-3	
2-Hexanone	ND	mg/kg	0.12	1		07/31/17 23:18	591-78-6	
Iodomethane	ND	mg/kg	0.12	1		07/31/17 23:18	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 36 (0-2) Lab ID: 50176347006 Collected: 07/26/17 10:35 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0058	1		07/31/17 23:18	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0058	1		07/31/17 23:18	99-87-6	
Methylene Chloride	ND	mg/kg	0.023	1		07/31/17 23:18	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.012	1		07/31/17 23:18	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.012	1		07/31/17 23:18	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.029	1		07/31/17 23:18	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0058	1		07/31/17 23:18	1634-04-4	
Naphthalene	ND	mg/kg	0.0058	1		07/31/17 23:18	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	103-65-1	
Styrene	ND	mg/kg	0.0058	1		07/31/17 23:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0058	1		07/31/17 23:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0058	1		07/31/17 23:18	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0058	1		07/31/17 23:18	127-18-4	
Toluene	ND	mg/kg	0.0058	1		07/31/17 23:18	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0058	1		07/31/17 23:18	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0058	1		07/31/17 23:18	79-00-5	
Trichloroethene	ND	mg/kg	0.0058	1		07/31/17 23:18	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0058	1		07/31/17 23:18	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0058	1		07/31/17 23:18	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0058	1		07/31/17 23:18	108-67-8	
Vinyl acetate	ND	mg/kg	0.12	1		07/31/17 23:18	108-05-4	
Vinyl chloride	ND	mg/kg	0.0058	1		07/31/17 23:18	75-01-4	
Xylene (Total)	ND	mg/kg	0.012	1		07/31/17 23:18	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%.	69-136	1		07/31/17 23:18	1868-53-7	
Toluene-d8 (S)	105	%.	64-150	1		07/31/17 23:18	2037-26-5	
4-Bromofluorobenzene (S)	82	%.	51-142	1		07/31/17 23:18	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	19.3	%	0.10	1		08/04/17 08:43		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 36 (8-10) Lab ID: 50176347007 Collected: 07/26/17 10:40 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.094	1		07/31/17 23:55	67-64-1	
Acrolein	ND	mg/kg	0.094	1		07/31/17 23:55	107-02-8	
Acrylonitrile	ND	mg/kg	0.094	1		07/31/17 23:55	107-13-1	
Benzene	ND	mg/kg	0.0047	1		07/31/17 23:55	71-43-2	
Bromobenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	108-86-1	
Bromoform	ND	mg/kg	0.0047	1		07/31/17 23:55	75-25-2	
Bromomethane	ND	mg/kg	0.0047	1		07/31/17 23:55	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.024	1		07/31/17 23:55	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	98-06-6	
Carbon disulfide	ND	mg/kg	0.0094	1		07/31/17 23:55	75-15-0	L2
Carbon tetrachloride	ND	mg/kg	0.0047	1		07/31/17 23:55	56-23-5	
Chlorobenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	108-90-7	
Chloroethane	ND	mg/kg	0.0047	1		07/31/17 23:55	75-00-3	
Chloroform	ND	mg/kg	0.0047	1		07/31/17 23:55	67-66-3	
Chloromethane	ND	mg/kg	0.0047	1		07/31/17 23:55	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0047	1		07/31/17 23:55	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0047	1		07/31/17 23:55	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0047	1		07/31/17 23:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0047	1		07/31/17 23:55	106-93-4	
Dibromomethane	ND	mg/kg	0.0047	1		07/31/17 23:55	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.094	1		07/31/17 23:55	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0047	1		07/31/17 23:55	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0047	1		07/31/17 23:55	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0047	1		07/31/17 23:55	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0047	1		07/31/17 23:55	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0047	1		07/31/17 23:55	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0047	1		07/31/17 23:55	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0047	1		07/31/17 23:55	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0047	1		07/31/17 23:55	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0047	1		07/31/17 23:55	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0047	1		07/31/17 23:55	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0047	1		07/31/17 23:55	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0047	1		07/31/17 23:55	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.094	1		07/31/17 23:55	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0047	1		07/31/17 23:55	87-68-3	
n-Hexane	ND	mg/kg	0.0047	1		07/31/17 23:55	110-54-3	
2-Hexanone	ND	mg/kg	0.094	1		07/31/17 23:55	591-78-6	
Iodomethane	ND	mg/kg	0.094	1		07/31/17 23:55	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 36 (8-10) Lab ID: 50176347007 Collected: 07/26/17 10:40 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0047	1		07/31/17 23:55	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0047	1		07/31/17 23:55	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	1		07/31/17 23:55	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.0094	1		07/31/17 23:55	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.0094	1		07/31/17 23:55	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.024	1		07/31/17 23:55	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0047	1		07/31/17 23:55	1634-04-4	
Naphthalene	ND	mg/kg	0.0047	1		07/31/17 23:55	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	103-65-1	
Styrene	ND	mg/kg	0.0047	1		07/31/17 23:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0047	1		07/31/17 23:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0047	1		07/31/17 23:55	79-34-5	
Tetrachloroethene	1.5	mg/kg	0.24	50		08/01/17 20:50	127-18-4	
Toluene	ND	mg/kg	0.0047	1		07/31/17 23:55	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0047	1		07/31/17 23:55	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0047	1		07/31/17 23:55	79-00-5	
Trichloroethene	0.067	mg/kg	0.0047	1		07/31/17 23:55	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0047	1		07/31/17 23:55	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0047	1		07/31/17 23:55	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0047	1		07/31/17 23:55	108-67-8	
Vinyl acetate	ND	mg/kg	0.094	1		07/31/17 23:55	108-05-4	
Vinyl chloride	ND	mg/kg	0.0047	1		07/31/17 23:55	75-01-4	
Xylene (Total)	ND	mg/kg	0.0094	1		07/31/17 23:55	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%.	69-136	1		07/31/17 23:55	1868-53-7	
Toluene-d8 (S)	103	%.	64-150	1		07/31/17 23:55	2037-26-5	
4-Bromofluorobenzene (S)	89	%.	51-142	1		07/31/17 23:55	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	3.8	%	0.10	1		08/04/17 08:43		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 37 (0-2) Lab ID: 50176347008 Collected: 07/26/17 11:20 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.11	1		08/01/17 21:28	67-64-1	
Acrolein	ND	mg/kg	0.11	1		08/01/17 21:28	107-02-8	
Acrylonitrile	ND	mg/kg	0.11	1		08/01/17 21:28	107-13-1	
Benzene	ND	mg/kg	0.0055	1		08/01/17 21:28	71-43-2	
Bromobenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	108-86-1	
Bromoform	ND	mg/kg	0.0055	1		08/01/17 21:28	75-25-2	
Bromomethane	ND	mg/kg	0.0055	1		08/01/17 21:28	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.028	1		08/01/17 21:28	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	98-06-6	
Carbon disulfide	ND	mg/kg	0.011	1		08/01/17 21:28	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0055	1		08/01/17 21:28	56-23-5	
Chlorobenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	108-90-7	
Chloroethane	ND	mg/kg	0.0055	1		08/01/17 21:28	75-00-3	
Chloroform	ND	mg/kg	0.0055	1		08/01/17 21:28	67-66-3	
Chloromethane	ND	mg/kg	0.0055	1		08/01/17 21:28	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0055	1		08/01/17 21:28	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0055	1		08/01/17 21:28	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0055	1		08/01/17 21:28	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0055	1		08/01/17 21:28	106-93-4	
Dibromomethane	ND	mg/kg	0.0055	1		08/01/17 21:28	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.11	1		08/01/17 21:28	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0055	1		08/01/17 21:28	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0055	1		08/01/17 21:28	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0055	1		08/01/17 21:28	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0055	1		08/01/17 21:28	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0055	1		08/01/17 21:28	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0055	1		08/01/17 21:28	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0055	1		08/01/17 21:28	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0055	1		08/01/17 21:28	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0055	1		08/01/17 21:28	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0055	1		08/01/17 21:28	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0055	1		08/01/17 21:28	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0055	1		08/01/17 21:28	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.11	1		08/01/17 21:28	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0055	1		08/01/17 21:28	87-68-3	
n-Hexane	ND	mg/kg	0.0055	1		08/01/17 21:28	110-54-3	
2-Hexanone	ND	mg/kg	0.11	1		08/01/17 21:28	591-78-6	
Iodomethane	ND	mg/kg	0.11	1		08/01/17 21:28	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 37 (0-2) Lab ID: 50176347008 Collected: 07/26/17 11:20 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0055	1		08/01/17 21:28	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0055	1		08/01/17 21:28	99-87-6	
Methylene Chloride	ND	mg/kg	0.022	1		08/01/17 21:28	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.011	1		08/01/17 21:28	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.011	1		08/01/17 21:28	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.028	1		08/01/17 21:28	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0055	1		08/01/17 21:28	1634-04-4	
Naphthalene	ND	mg/kg	0.0055	1		08/01/17 21:28	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	103-65-1	
Styrene	ND	mg/kg	0.0055	1		08/01/17 21:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0055	1		08/01/17 21:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0055	1		08/01/17 21:28	79-34-5	
Tetrachloroethene	0.030	mg/kg	0.0055	1		08/01/17 21:28	127-18-4	
Toluene	ND	mg/kg	0.0055	1		08/01/17 21:28	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0055	1		08/01/17 21:28	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0055	1		08/01/17 21:28	79-00-5	
Trichloroethene	0.0061	mg/kg	0.0055	1		08/01/17 21:28	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0055	1		08/01/17 21:28	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0055	1		08/01/17 21:28	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0055	1		08/01/17 21:28	108-67-8	
Vinyl acetate	ND	mg/kg	0.11	1		08/01/17 21:28	108-05-4	
Vinyl chloride	ND	mg/kg	0.0055	1		08/01/17 21:28	75-01-4	
Xylene (Total)	ND	mg/kg	0.011	1		08/01/17 21:28	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%.	69-136	1		08/01/17 21:28	1868-53-7	
Toluene-d8 (S)	109	%.	64-150	1		08/01/17 21:28	2037-26-5	
4-Bromofluorobenzene (S)	86	%.	51-142	1		08/01/17 21:28	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	15.4	%	0.10	1		08/04/17 08:43		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 37 (8-10) Lab ID: 50176347009 Collected: 07/26/17 11:25 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.096	1		08/01/17 22:06	67-64-1	
Acrolein	ND	mg/kg	0.096	1		08/01/17 22:06	107-02-8	
Acrylonitrile	ND	mg/kg	0.096	1		08/01/17 22:06	107-13-1	
Benzene	ND	mg/kg	0.0048	1		08/01/17 22:06	71-43-2	
Bromobenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	108-86-1	
Bromoform	ND	mg/kg	0.0048	1		08/01/17 22:06	75-25-2	
Bromomethane	ND	mg/kg	0.0048	1		08/01/17 22:06	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.024	1		08/01/17 22:06	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	98-06-6	
Carbon disulfide	ND	mg/kg	0.0096	1		08/01/17 22:06	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0048	1		08/01/17 22:06	56-23-5	
Chlorobenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	108-90-7	
Chloroethane	ND	mg/kg	0.0048	1		08/01/17 22:06	75-00-3	
Chloroform	ND	mg/kg	0.0048	1		08/01/17 22:06	67-66-3	
Chloromethane	ND	mg/kg	0.0048	1		08/01/17 22:06	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0048	1		08/01/17 22:06	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0048	1		08/01/17 22:06	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0048	1		08/01/17 22:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0048	1		08/01/17 22:06	106-93-4	
Dibromomethane	ND	mg/kg	0.0048	1		08/01/17 22:06	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.096	1		08/01/17 22:06	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0048	1		08/01/17 22:06	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0048	1		08/01/17 22:06	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0048	1		08/01/17 22:06	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0048	1		08/01/17 22:06	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0048	1		08/01/17 22:06	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0048	1		08/01/17 22:06	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0048	1		08/01/17 22:06	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0048	1		08/01/17 22:06	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0048	1		08/01/17 22:06	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0048	1		08/01/17 22:06	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0048	1		08/01/17 22:06	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0048	1		08/01/17 22:06	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.096	1		08/01/17 22:06	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0048	1		08/01/17 22:06	87-68-3	
n-Hexane	ND	mg/kg	0.0048	1		08/01/17 22:06	110-54-3	
2-Hexanone	ND	mg/kg	0.096	1		08/01/17 22:06	591-78-6	
Iodomethane	ND	mg/kg	0.096	1		08/01/17 22:06	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 37 (8-10) Lab ID: 50176347009 Collected: 07/26/17 11:25 Received: 07/27/17 09:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0048	1		08/01/17 22:06	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0048	1		08/01/17 22:06	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	1		08/01/17 22:06	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.0096	1		08/01/17 22:06	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.0096	1		08/01/17 22:06	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.024	1		08/01/17 22:06	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0048	1		08/01/17 22:06	1634-04-4	
Naphthalene	ND	mg/kg	0.0048	1		08/01/17 22:06	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	103-65-1	
Styrene	ND	mg/kg	0.0048	1		08/01/17 22:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0048	1		08/01/17 22:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0048	1		08/01/17 22:06	79-34-5	
Tetrachloroethene	4.2	mg/kg	0.23	50		08/01/17 22:43	127-18-4	
Toluene	ND	mg/kg	0.0048	1		08/01/17 22:06	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0048	1		08/01/17 22:06	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0048	1		08/01/17 22:06	79-00-5	
Trichloroethene	0.17	mg/kg	0.0048	1		08/01/17 22:06	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0048	1		08/01/17 22:06	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0048	1		08/01/17 22:06	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0048	1		08/01/17 22:06	108-67-8	
Vinyl acetate	ND	mg/kg	0.096	1		08/01/17 22:06	108-05-4	
Vinyl chloride	ND	mg/kg	0.0048	1		08/01/17 22:06	75-01-4	
Xylene (Total)	ND	mg/kg	0.0096	1		08/01/17 22:06	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	69-136	1		08/01/17 22:06	1868-53-7	
Toluene-d8 (S)	112	%.	64-150	1		08/01/17 22:06	2037-26-5	
4-Bromofluorobenzene (S)	81	%.	51-142	1		08/01/17 22:06	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	4.6	%	0.10	1		08/04/17 08:43		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 40 (29-33) **Lab ID: 50176347010** Collected: 07/26/17 14:55 Received: 07/27/17 09:47 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		07/28/17 16:13	67-64-1	
Acrolein	ND	ug/L	50.0	1		07/28/17 16:13	107-02-8	
Acrylonitrile	ND	ug/L	100	1		07/28/17 16:13	107-13-1	
Benzene	ND	ug/L	5.0	1		07/28/17 16:13	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		07/28/17 16:13	108-86-1	
Bromoform	ND	ug/L	5.0	1		07/28/17 16:13	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		07/28/17 16:13	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		07/28/17 16:13	75-25-2	
Bromoform	ND	ug/L	5.0	1		07/28/17 16:13	74-83-9	
Bromomethane	ND	ug/L	5.0	1		07/28/17 16:13	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		07/28/17 16:13	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		07/28/17 16:13	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		07/28/17 16:13	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		07/28/17 16:13	106-46-7	
Carbon disulfide	ND	ug/L	10.0	1		07/28/17 16:13	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		07/28/17 16:13	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		07/28/17 16:13	108-90-7	
Chloroethane	ND	ug/L	5.0	1		07/28/17 16:13	75-00-3	
Chloroform	ND	ug/L	5.0	1		07/28/17 16:13	67-66-3	
Chloromethane	ND	ug/L	5.0	1		07/28/17 16:13	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		07/28/17 16:13	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		07/28/17 16:13	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		07/28/17 16:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		07/28/17 16:13	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		07/28/17 16:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:13	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		07/28/17 16:13	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		07/28/17 16:13	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		07/28/17 16:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		07/28/17 16:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		07/28/17 16:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		07/28/17 16:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		07/28/17 16:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		07/28/17 16:13	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		07/28/17 16:13	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		07/28/17 16:13	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		07/28/17 16:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		07/28/17 16:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		07/28/17 16:13	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		07/28/17 16:13	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		07/28/17 16:13	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		07/28/17 16:13	87-68-3	
n-Hexane	ND	ug/L	5.0	1		07/28/17 16:13	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		07/28/17 16:13	591-78-6	
Iodomethane	ND	ug/L	10.0	1		07/28/17 16:13	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		07/28/17 16:13	98-82-8	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 40 (29-33) **Lab ID: 50176347010** Collected: 07/26/17 14:55 Received: 07/27/17 09:47 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		07/28/17 16:13	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		07/28/17 16:13	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		07/28/17 16:13	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		07/28/17 16:13	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		07/28/17 16:13	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		07/28/17 16:13	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		07/28/17 16:13	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		07/28/17 16:13	103-65-1	
Styrene	ND	ug/L	5.0	1		07/28/17 16:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		07/28/17 16:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		07/28/17 16:13	79-34-5	
Tetrachloroethene	11.9	ug/L	5.0	1		07/28/17 16:13	127-18-4	
Toluene	ND	ug/L	5.0	1		07/28/17 16:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		07/28/17 16:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		07/28/17 16:13	79-00-5	
Trichloroethene	5.4	ug/L	5.0	1		07/28/17 16:13	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		07/28/17 16:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		07/28/17 16:13	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		07/28/17 16:13	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		07/28/17 16:13	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		07/28/17 16:13	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		07/28/17 16:13	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		07/28/17 16:13	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	86-116	1		07/28/17 16:13	1868-53-7	
4-Bromofluorobenzene (S)	98	%.	84-113	1		07/28/17 16:13	460-00-4	
Toluene-d8 (S)	101	%.	86-111	1		07/28/17 16:13	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 40 (15-19) **Lab ID: 50176347011** Collected: 07/26/17 15:05 Received: 07/27/17 09:47 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		07/28/17 16:48	67-64-1	
Acrolein	ND	ug/L	50.0	1		07/28/17 16:48	107-02-8	
Acrylonitrile	ND	ug/L	100	1		07/28/17 16:48	107-13-1	
Benzene	ND	ug/L	5.0	1		07/28/17 16:48	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		07/28/17 16:48	108-86-1	
Bromoform	ND	ug/L	5.0	1		07/28/17 16:48	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		07/28/17 16:48	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		07/28/17 16:48	75-25-2	
Bromoform	ND	ug/L	5.0	1		07/28/17 16:48	74-83-9	
Bromomethane	ND	ug/L	5.0	1		07/28/17 16:48	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		07/28/17 16:48	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		07/28/17 16:48	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		07/28/17 16:48	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		07/28/17 16:48	106-46-7	
Carbon disulfide	ND	ug/L	10.0	1		07/28/17 16:48	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		07/28/17 16:48	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		07/28/17 16:48	108-90-7	
Chloroethane	ND	ug/L	5.0	1		07/28/17 16:48	75-00-3	
Chloroform	ND	ug/L	5.0	1		07/28/17 16:48	67-66-3	
Chloromethane	ND	ug/L	5.0	1		07/28/17 16:48	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		07/28/17 16:48	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		07/28/17 16:48	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		07/28/17 16:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		07/28/17 16:48	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		07/28/17 16:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:48	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		07/28/17 16:48	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		07/28/17 16:48	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		07/28/17 16:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		07/28/17 16:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		07/28/17 16:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		07/28/17 16:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		07/28/17 16:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		07/28/17 16:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		07/28/17 16:48	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		07/28/17 16:48	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		07/28/17 16:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		07/28/17 16:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		07/28/17 16:48	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		07/28/17 16:48	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		07/28/17 16:48	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		07/28/17 16:48	87-68-3	
n-Hexane	ND	ug/L	5.0	1		07/28/17 16:48	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		07/28/17 16:48	591-78-6	
Iodomethane	ND	ug/L	10.0	1		07/28/17 16:48	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		07/28/17 16:48	98-82-8	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 40 (15-19) **Lab ID: 50176347011** Collected: 07/26/17 15:05 Received: 07/27/17 09:47 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		07/28/17 16:48	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		07/28/17 16:48	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		07/28/17 16:48	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		07/28/17 16:48	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		07/28/17 16:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		07/28/17 16:48	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		07/28/17 16:48	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		07/28/17 16:48	103-65-1	
Styrene	ND	ug/L	5.0	1		07/28/17 16:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		07/28/17 16:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		07/28/17 16:48	79-34-5	
Tetrachloroethene	274	ug/L	25.0	5		07/31/17 12:57	127-18-4	
Toluene	ND	ug/L	5.0	1		07/28/17 16:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		07/28/17 16:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		07/28/17 16:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		07/28/17 16:48	79-00-5	
Trichloroethene	190	ug/L	5.0	1		07/28/17 16:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		07/28/17 16:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		07/28/17 16:48	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		07/28/17 16:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		07/28/17 16:48	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		07/28/17 16:48	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		07/28/17 16:48	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		07/28/17 16:48	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	86-116	1		07/28/17 16:48	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	84-113	1		07/28/17 16:48	460-00-4	
Toluene-d8 (S)	102	%.	86-111	1		07/28/17 16:48	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: Dup GW **Lab ID:** 50176347012 **Collected:** 07/26/17 08:00 **Received:** 07/27/17 09:47 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		07/28/17 17:23	67-64-1	
Acrolein	ND	ug/L	50.0	1		07/28/17 17:23	107-02-8	
Acrylonitrile	ND	ug/L	100	1		07/28/17 17:23	107-13-1	
Benzene	ND	ug/L	5.0	1		07/28/17 17:23	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		07/28/17 17:23	108-86-1	
Bromoform	ND	ug/L	5.0	1		07/28/17 17:23	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		07/28/17 17:23	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		07/28/17 17:23	75-25-2	
Bromoform	ND	ug/L	5.0	1		07/28/17 17:23	74-83-9	
Bromomethane	ND	ug/L	25.0	1		07/28/17 17:23	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		07/28/17 17:23	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		07/28/17 17:23	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		07/28/17 17:23	98-06-6	
tert-Butylbenzene	ND	ug/L	10.0	1		07/28/17 17:23	75-15-0	
Carbon disulfide	ND	ug/L	5.0	1		07/28/17 17:23	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		07/28/17 17:23	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		07/28/17 17:23	75-00-3	
Chloroethane	ND	ug/L	5.0	1		07/28/17 17:23	67-66-3	
Chloroform	ND	ug/L	5.0	1		07/28/17 17:23	74-87-3	
Chloromethane	ND	ug/L	5.0	1		07/28/17 17:23	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		07/28/17 17:23	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		07/28/17 17:23	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		07/28/17 17:23	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		07/28/17 17:23	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		07/28/17 17:23	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		07/28/17 17:23	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		07/28/17 17:23	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		07/28/17 17:23	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		07/28/17 17:23	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		07/28/17 17:23	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		07/28/17 17:23	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		07/28/17 17:23	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		07/28/17 17:23	78-87-5	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		07/28/17 17:23	142-28-9	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		07/28/17 17:23	594-20-7	
1,2-Dichloropropane	ND	ug/L	5.0	1		07/28/17 17:23	563-58-6	
1,3-Dichloropropane	ND	ug/L	5.0	1		07/28/17 17:23	10061-01-5	
2,2-Dichloropropane	ND	ug/L	5.0	1		07/28/17 17:23	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		07/28/17 17:23	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		07/28/17 17:23	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		07/28/17 17:23	87-68-3	
n-Hexane	ND	ug/L	5.0	1		07/28/17 17:23	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		07/28/17 17:23	591-78-6	
Iodomethane	ND	ug/L	10.0	1		07/28/17 17:23	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		07/28/17 17:23	98-82-8	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: Dup GW	Lab ID: 50176347012	Collected: 07/26/17 08:00	Received: 07/27/17 09:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		07/28/17 17:23	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		07/28/17 17:23	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		07/28/17 17:23	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		07/28/17 17:23	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		07/28/17 17:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		07/28/17 17:23	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		07/28/17 17:23	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		07/28/17 17:23	103-65-1	
Styrene	ND	ug/L	5.0	1		07/28/17 17:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		07/28/17 17:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		07/28/17 17:23	79-34-5	
Tetrachloroethene	280	ug/L	25.0	5		07/31/17 13:32	127-18-4	
Toluene	ND	ug/L	5.0	1		07/28/17 17:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		07/28/17 17:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		07/28/17 17:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		07/28/17 17:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		07/28/17 17:23	79-00-5	
Trichloroethene	177	ug/L	5.0	1		07/28/17 17:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		07/28/17 17:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		07/28/17 17:23	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		07/28/17 17:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		07/28/17 17:23	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		07/28/17 17:23	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		07/28/17 17:23	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		07/28/17 17:23	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	86-116	1		07/28/17 17:23	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	84-113	1		07/28/17 17:23	460-00-4	
Toluene-d8 (S)	102	%.	86-111	1		07/28/17 17:23	2037-26-5	

REPORT OF LABORATORY ANALYSIS



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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 40 (6-10) Lab ID: **50176347013** Collected: 07/26/17 15:20 Received: 07/27/17 09:47 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		07/29/17 03:55	67-64-1	
Acrolein	ND	ug/L	50.0	1		07/29/17 03:55	107-02-8	
Acrylonitrile	ND	ug/L	100	1		07/29/17 03:55	107-13-1	
Benzene	ND	ug/L	5.0	1		07/29/17 03:55	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		07/29/17 03:55	108-86-1	
Bromoform	ND	ug/L	5.0	1		07/29/17 03:55	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		07/29/17 03:55	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		07/29/17 03:55	75-25-2	
Bromoform	ND	ug/L	5.0	1		07/29/17 03:55	74-83-9	
Bromomethane	ND	ug/L	5.0	1		07/29/17 03:55	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		07/29/17 03:55	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		07/29/17 03:55	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		07/29/17 03:55	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		07/29/17 03:55	75-15-0	
Carbon disulfide	ND	ug/L	10.0	1		07/29/17 03:55	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		07/29/17 03:55	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		07/29/17 03:55	75-00-3	
Chloroethane	ND	ug/L	5.0	1		07/29/17 03:55	67-66-3	
Chloroform	ND	ug/L	5.0	1		07/29/17 03:55	74-87-3	
Chloromethane	ND	ug/L	5.0	1		07/29/17 03:55	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		07/29/17 03:55	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		07/29/17 03:55	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		07/29/17 03:55	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		07/29/17 03:55	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		07/29/17 03:55	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		07/29/17 03:55	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		07/29/17 03:55	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		07/29/17 03:55	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		07/29/17 03:55	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		07/29/17 03:55	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		07/29/17 03:55	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		07/29/17 03:55	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		07/29/17 03:55	78-87-5	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		07/29/17 03:55	142-28-9	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		07/29/17 03:55	594-20-7	
1,2-Dichloropropane	ND	ug/L	5.0	1		07/29/17 03:55	563-58-6	
1,3-Dichloropropane	ND	ug/L	5.0	1		07/29/17 03:55	10061-01-5	
2,2-Dichloropropane	ND	ug/L	5.0	1		07/29/17 03:55	10061-02-6	
1,1-Dichloropropene	ND	ug/L	5.0	1		07/29/17 03:55	100-41-4	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		07/29/17 03:55	97-63-2	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		07/29/17 03:55	87-68-3	
Ethylbenzene	ND	ug/L	5.0	1		07/29/17 03:55	110-54-3	
Ethyl methacrylate	ND	ug/L	25.0	1		07/29/17 03:55	591-78-6	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1		07/29/17 03:55	74-88-4	
n-Hexane	ND	ug/L	5.0	1		07/29/17 03:55	98-82-8	
2-Hexanone	ND	ug/L	25.0	1		07/29/17 03:55		
Iodomethane	ND	ug/L	10.0	1		07/29/17 03:55		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		07/29/17 03:55		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: PB 40 (6-10) Lab ID: **50176347013** Collected: 07/26/17 15:20 Received: 07/27/17 09:47 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		07/29/17 03:55	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		07/29/17 03:55	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		07/29/17 03:55	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		07/29/17 03:55	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		07/29/17 03:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		07/29/17 03:55	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		07/29/17 03:55	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		07/29/17 03:55	103-65-1	
Styrene	ND	ug/L	5.0	1		07/29/17 03:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		07/29/17 03:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		07/29/17 03:55	79-34-5	
Tetrachloroethene	259	ug/L	5.0	1		07/29/17 03:55	127-18-4	
Toluene	ND	ug/L	5.0	1		07/29/17 03:55	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		07/29/17 03:55	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		07/29/17 03:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		07/29/17 03:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		07/29/17 03:55	79-00-5	
Trichloroethene	204	ug/L	5.0	1		07/29/17 03:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		07/29/17 03:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		07/29/17 03:55	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		07/29/17 03:55	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		07/29/17 03:55	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		07/29/17 03:55	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		07/29/17 03:55	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		07/29/17 03:55	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%.	86-116	1		07/29/17 03:55	1868-53-7	
4-Bromofluorobenzene (S)	98	%.	84-113	1		07/29/17 03:55	460-00-4	
Toluene-d8 (S)	100	%.	86-111	1		07/29/17 03:55	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: Trip Blank	Lab ID: 50176347014	Collected: 07/26/17 08:00	Received: 07/27/17 09:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		07/29/17 04:30	67-64-1	
Acrolein	ND	ug/L	50.0	1		07/29/17 04:30	107-02-8	
Acrylonitrile	ND	ug/L	100	1		07/29/17 04:30	107-13-1	
Benzene	ND	ug/L	5.0	1		07/29/17 04:30	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		07/29/17 04:30	108-86-1	
Bromoform	ND	ug/L	5.0	1		07/29/17 04:30	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		07/29/17 04:30	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		07/29/17 04:30	75-25-2	
Bromoform	ND	ug/L	5.0	1		07/29/17 04:30	74-83-9	
Bromomethane	ND	ug/L	5.0	1		07/29/17 04:30	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		07/29/17 04:30	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		07/29/17 04:30	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		07/29/17 04:30	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		07/29/17 04:30	75-15-0	
Carbon disulfide	ND	ug/L	10.0	1		07/29/17 04:30	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		07/29/17 04:30	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		07/29/17 04:30	75-00-3	
Chloroethane	ND	ug/L	5.0	1		07/29/17 04:30	67-66-3	
Chloroform	ND	ug/L	5.0	1		07/29/17 04:30	74-87-3	
Chloromethane	ND	ug/L	5.0	1		07/29/17 04:30	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		07/29/17 04:30	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		07/29/17 04:30	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		07/29/17 04:30	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		07/29/17 04:30	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		07/29/17 04:30	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		07/29/17 04:30	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		07/29/17 04:30	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		07/29/17 04:30	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		07/29/17 04:30	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		07/29/17 04:30	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		07/29/17 04:30	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		07/29/17 04:30	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		07/29/17 04:30	78-87-5	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		07/29/17 04:30	142-28-9	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		07/29/17 04:30	594-20-7	
1,2-Dichloropropane	ND	ug/L	5.0	1		07/29/17 04:30	563-58-6	
1,3-Dichloropropane	ND	ug/L	5.0	1		07/29/17 04:30	10061-01-5	
2,2-Dichloropropane	ND	ug/L	5.0	1		07/29/17 04:30	100-41-4	
1,1-Dichloropropene	ND	ug/L	5.0	1		07/29/17 04:30	97-63-2	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		07/29/17 04:30	87-68-3	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		07/29/17 04:30	110-54-3	
Ethylbenzene	ND	ug/L	5.0	1		07/29/17 04:30	591-78-6	
Ethyl methacrylate	ND	ug/L	100	1		07/29/17 04:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		07/29/17 04:30	98-82-8	
n-Hexane	ND	ug/L	5.0	1		07/29/17 04:30	100-41-4	
2-Hexanone	ND	ug/L	25.0	1		07/29/17 04:30	591-78-6	
Iodomethane	ND	ug/L	10.0	1		07/29/17 04:30	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		07/29/17 04:30		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

Sample: Trip Blank	Lab ID: 50176347014	Collected: 07/26/17 08:00	Received: 07/27/17 09:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		07/29/17 04:30	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		07/29/17 04:30	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		07/29/17 04:30	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		07/29/17 04:30	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		07/29/17 04:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		07/29/17 04:30	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		07/29/17 04:30	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		07/29/17 04:30	103-65-1	
Styrene	ND	ug/L	5.0	1		07/29/17 04:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		07/29/17 04:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		07/29/17 04:30	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		07/29/17 04:30	127-18-4	
Toluene	ND	ug/L	5.0	1		07/29/17 04:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		07/29/17 04:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		07/29/17 04:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		07/29/17 04:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		07/29/17 04:30	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		07/29/17 04:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		07/29/17 04:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		07/29/17 04:30	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		07/29/17 04:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		07/29/17 04:30	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		07/29/17 04:30	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		07/29/17 04:30	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		07/29/17 04:30	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%.	86-116	1		07/29/17 04:30	1868-53-7	
4-Bromofluorobenzene (S)	97	%.	84-113	1		07/29/17 04:30	460-00-4	
Toluene-d8 (S)	100	%.	86-111	1		07/29/17 04:30	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176347

QC Batch:	398889	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	50176347010, 50176347011, 50176347012		

METHOD BLANK: 1837156 Matrix: Water

Associated Lab Samples: 50176347010, 50176347011, 50176347012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	07/28/17 15:02	
1,1,1-Trichloroethane	ug/L	ND	5.0	07/28/17 15:02	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	07/28/17 15:02	
1,1,2-Trichloroethane	ug/L	ND	5.0	07/28/17 15:02	
1,1-Dichloroethane	ug/L	ND	5.0	07/28/17 15:02	
1,1-Dichloroethene	ug/L	ND	5.0	07/28/17 15:02	
1,1-Dichloropropene	ug/L	ND	5.0	07/28/17 15:02	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	07/28/17 15:02	
1,2,3-Trichloropropane	ug/L	ND	5.0	07/28/17 15:02	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/28/17 15:02	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	07/28/17 15:02	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	07/28/17 15:02	
1,2-Dichlorobenzene	ug/L	ND	5.0	07/28/17 15:02	
1,2-Dichloroethane	ug/L	ND	5.0	07/28/17 15:02	
1,2-Dichloropropane	ug/L	ND	5.0	07/28/17 15:02	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	07/28/17 15:02	
1,3-Dichlorobenzene	ug/L	ND	5.0	07/28/17 15:02	
1,3-Dichloropropane	ug/L	ND	5.0	07/28/17 15:02	
1,4-Dichlorobenzene	ug/L	ND	5.0	07/28/17 15:02	
1-Methylnaphthalene	ug/L	ND	5.0	07/28/17 15:02	N2
2,2-Dichloropropane	ug/L	ND	5.0	07/28/17 15:02	
2-Butanone (MEK)	ug/L	ND	25.0	07/28/17 15:02	
2-Chlorotoluene	ug/L	ND	5.0	07/28/17 15:02	
2-Hexanone	ug/L	ND	25.0	07/28/17 15:02	
2-Methylnaphthalene	ug/L	ND	10.0	07/28/17 15:02	
4-Chlorotoluene	ug/L	ND	5.0	07/28/17 15:02	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	07/28/17 15:02	
Acetone	ug/L	ND	100	07/28/17 15:02	
Acrolein	ug/L	ND	50.0	07/28/17 15:02	
Acrylonitrile	ug/L	ND	100	07/28/17 15:02	
Benzene	ug/L	ND	5.0	07/28/17 15:02	
Bromobenzene	ug/L	ND	5.0	07/28/17 15:02	
Bromochloromethane	ug/L	ND	5.0	07/28/17 15:02	
Bromodichloromethane	ug/L	ND	5.0	07/28/17 15:02	
Bromoform	ug/L	ND	5.0	07/28/17 15:02	
Bromomethane	ug/L	ND	5.0	07/28/17 15:02	
Carbon disulfide	ug/L	ND	10.0	07/28/17 15:02	
Carbon tetrachloride	ug/L	ND	5.0	07/28/17 15:02	
Chlorobenzene	ug/L	ND	5.0	07/28/17 15:02	
Chloroethane	ug/L	ND	5.0	07/28/17 15:02	
Chloroform	ug/L	ND	5.0	07/28/17 15:02	

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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176347

METHOD BLANK: 1837156 Matrix: Water

Associated Lab Samples: 50176347010, 50176347011, 50176347012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	ug/L	ND	5.0	07/28/17 15:02	
cis-1,2-Dichloroethene	ug/L	ND	5.0	07/28/17 15:02	
cis-1,3-Dichloropropene	ug/L	ND	5.0	07/28/17 15:02	
Dibromochloromethane	ug/L	ND	5.0	07/28/17 15:02	
Dibromomethane	ug/L	ND	5.0	07/28/17 15:02	
Dichlorodifluoromethane	ug/L	ND	5.0	07/28/17 15:02	
Ethyl methacrylate	ug/L	ND	100	07/28/17 15:02	
Ethylbenzene	ug/L	ND	5.0	07/28/17 15:02	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/28/17 15:02	
Iodomethane	ug/L	ND	10.0	07/28/17 15:02	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	07/28/17 15:02	
Methyl-tert-butyl ether	ug/L	ND	4.0	07/28/17 15:02	
Methylene Chloride	ug/L	ND	5.0	07/28/17 15:02	
n-Butylbenzene	ug/L	ND	5.0	07/28/17 15:02	
n-Hexane	ug/L	ND	5.0	07/28/17 15:02	
n-Propylbenzene	ug/L	ND	5.0	07/28/17 15:02	
Naphthalene	ug/L	ND	1.7	07/28/17 15:02	
p-Isopropyltoluene	ug/L	ND	5.0	07/28/17 15:02	
sec-Butylbenzene	ug/L	ND	5.0	07/28/17 15:02	
Styrene	ug/L	ND	5.0	07/28/17 15:02	
tert-Butylbenzene	ug/L	ND	5.0	07/28/17 15:02	
Tetrachloroethene	ug/L	ND	5.0	07/28/17 15:02	
Toluene	ug/L	ND	5.0	07/28/17 15:02	
trans-1,2-Dichloroethene	ug/L	ND	5.0	07/28/17 15:02	
trans-1,3-Dichloropropene	ug/L	ND	5.0	07/28/17 15:02	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	07/28/17 15:02	
Trichloroethene	ug/L	ND	5.0	07/28/17 15:02	
Trichlorofluoromethane	ug/L	ND	5.0	07/28/17 15:02	
Vinyl acetate	ug/L	ND	50.0	07/28/17 15:02	
Vinyl chloride	ug/L	ND	2.0	07/28/17 15:02	
Xylene (Total)	ug/L	ND	10.0	07/28/17 15:02	
4-Bromofluorobenzene (S)	%.	98	84-113	07/28/17 15:02	
Dibromofluoromethane (S)	%.	100	86-116	07/28/17 15:02	
Toluene-d8 (S)	%.	99	86-111	07/28/17 15:02	

LABORATORY CONTROL SAMPLE: 1837157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.7	103	80-123	
1,1,1-Trichloroethane	ug/L	50	51.7	103	72-126	
1,1,2,2-Tetrachloroethane	ug/L	50	49.9	100	74-124	
1,1,2-Trichloroethane	ug/L	50	51.6	103	79-121	
1,1-Dichloroethane	ug/L	50	53.8	108	77-122	
1,1-Dichloroethene	ug/L	50	47.7	95	70-131	

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QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

LABORATORY CONTROL SAMPLE: 1837157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloropropene	ug/L	50	54.6	109	79-124	
1,2,3-Trichlorobenzene	ug/L	50	60.0	120	70-129	
1,2,3-Trichloropropane	ug/L	50	52.8	106	79-128	
1,2,4-Trichlorobenzene	ug/L	50	54.9	110	69-129	
1,2,4-Trimethylbenzene	ug/L	50	51.1	102	76-125	
1,2-Dibromoethane (EDB)	ug/L	50	51.1	102	81-123	
1,2-Dichlorobenzene	ug/L	50	52.9	106	77-118	
1,2-Dichloroethane	ug/L	50	49.4	99	72-119	
1,2-Dichloropropane	ug/L	50	52.3	105	78-125	
1,3,5-Trimethylbenzene	ug/L	50	52.9	106	79-123	
1,3-Dichlorobenzene	ug/L	50	52.1	104	74-120	
1,3-Dichloropropane	ug/L	50	55.9	112	80-127	
1,4-Dichlorobenzene	ug/L	50	49.8	100	72-118	
1-Methylnaphthalene	ug/L	50	41.9	84	64-134 N2	
2,2-Dichloropropane	ug/L	50	54.9	110	41-145	
2-Butanone (MEK)	ug/L	250	324	129	61-150	
2-Chlorotoluene	ug/L	50	51.6	103	77-119	
2-Hexanone	ug/L	250	298	119	67-141	
2-Methylnaphthalene	ug/L	50	42.9	86	53-112	
4-Chlorotoluene	ug/L	50	53.1	106	75-123	
4-Methyl-2-pentanone (MIBK)	ug/L	250	296	118	71-131	
Acetone	ug/L	250	283	113	39-166	
Acrolein	ug/L	1000	817	82	22-200	
Acrylonitrile	ug/L	200	234	117	62-130	
Benzene	ug/L	50	51.9	104	79-120	
Bromobenzene	ug/L	50	55.8	112	76-121	
Bromochloromethane	ug/L	50	59.6	119	69-136	
Bromodichloromethane	ug/L	50	49.9	100	76-125	
Bromoform	ug/L	50	49.6	99	69-119	
Bromomethane	ug/L	50	54.4	109	27-161	
Carbon disulfide	ug/L	50	51.3	103	60-130	
Carbon tetrachloride	ug/L	50	52.7	105	74-132	
Chlorobenzene	ug/L	50	49.7	99	77-116	
Chloroethane	ug/L	50	57.7	115	51-132	
Chloroform	ug/L	50	51.0	102	76-118	
Chloromethane	ug/L	50	48.3	97	46-126	
cis-1,2-Dichloroethene	ug/L	50	53.0	106	74-126	
cis-1,3-Dichloropropene	ug/L	50	53.9	108	78-125	
Dibromochloromethane	ug/L	50	53.4	107	80-123	
Dibromomethane	ug/L	50	51.0	102	75-124	
Dichlorodifluoromethane	ug/L	50	49.8	100	42-152	
Ethyl methacrylate	ug/L	200	240	120	75-136	
Ethylbenzene	ug/L	50	53.2	106	80-123	
Hexachloro-1,3-butadiene	ug/L	50	56.9	114	74-127	
Iodomethane	ug/L	100	102	102	43-156	
Isopropylbenzene (Cumene)	ug/L	50	50.7	101	80-122	
Methyl-tert-butyl ether	ug/L	50	51.5	103	63-131	

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REPORT OF LABORATORY ANALYSIS



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QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

LABORATORY CONTROL SAMPLE: 1837157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	50	48.1	96	62-126	
n-Butylbenzene	ug/L	50	56.2	112	75-123	
n-Hexane	ug/L	50	56.2	112	66-129	
n-Propylbenzene	ug/L	50	54.4	109	79-128	
Naphthalene	ug/L	50	59.9	120	66-130	
p-Isopropyltoluene	ug/L	50	54.8	110	79-124	
sec-Butylbenzene	ug/L	50	53.0	106	80-126	
Styrene	ug/L	50	52.2	104	81-125	
tert-Butylbenzene	ug/L	50	43.8	88	62-106	
Tetrachloroethene	ug/L	50	47.3	95	74-119	
Toluene	ug/L	50	50.4	101	77-117	
trans-1,2-Dichloroethene	ug/L	50	52.1	104	74-128	
trans-1,3-Dichloropropene	ug/L	50	51.1	102	75-132	
trans-1,4-Dichloro-2-butene	ug/L	200	158	79	42-134	
Trichloroethene	ug/L	50	50.2	100	75-119	
Trichlorofluoromethane	ug/L	50	56.3	113	57-152	
Vinyl acetate	ug/L	200	256	128	71-148	
Vinyl chloride	ug/L	50	53.2	106	62-137	
Xylene (Total)	ug/L	150	151	101	79-121	
4-Bromofluorobenzene (S)	%.			103	84-113	
Dibromofluoromethane (S)	%.			101	86-116	
Toluene-d8 (S)	%.			101	86-111	

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REPORT OF LABORATORY ANALYSIS



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QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176347

QC Batch:	398930	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	50176347013, 50176347014		

METHOD BLANK: 1837351 Matrix: Water

Associated Lab Samples: 50176347013, 50176347014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	07/29/17 03:20	
1,1,1-Trichloroethane	ug/L	ND	5.0	07/29/17 03:20	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	07/29/17 03:20	
1,1,2-Trichloroethane	ug/L	ND	5.0	07/29/17 03:20	
1,1-Dichloroethane	ug/L	ND	5.0	07/29/17 03:20	
1,1-Dichloroethene	ug/L	ND	5.0	07/29/17 03:20	
1,1-Dichloropropene	ug/L	ND	5.0	07/29/17 03:20	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	07/29/17 03:20	
1,2,3-Trichloropropane	ug/L	ND	5.0	07/29/17 03:20	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/29/17 03:20	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	07/29/17 03:20	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	07/29/17 03:20	
1,2-Dichlorobenzene	ug/L	ND	5.0	07/29/17 03:20	
1,2-Dichloroethane	ug/L	ND	5.0	07/29/17 03:20	
1,2-Dichloropropane	ug/L	ND	5.0	07/29/17 03:20	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	07/29/17 03:20	
1,3-Dichlorobenzene	ug/L	ND	5.0	07/29/17 03:20	
1,3-Dichloropropane	ug/L	ND	5.0	07/29/17 03:20	
1,4-Dichlorobenzene	ug/L	ND	5.0	07/29/17 03:20	
1-Methylnaphthalene	ug/L	ND	5.0	07/29/17 03:20	N2
2,2-Dichloropropane	ug/L	ND	5.0	07/29/17 03:20	
2-Butanone (MEK)	ug/L	ND	25.0	07/29/17 03:20	
2-Chlorotoluene	ug/L	ND	5.0	07/29/17 03:20	
2-Hexanone	ug/L	ND	25.0	07/29/17 03:20	
2-Methylnaphthalene	ug/L	ND	10.0	07/29/17 03:20	
4-Chlorotoluene	ug/L	ND	5.0	07/29/17 03:20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	07/29/17 03:20	
Acetone	ug/L	ND	100	07/29/17 03:20	
Acrolein	ug/L	ND	50.0	07/29/17 03:20	
Acrylonitrile	ug/L	ND	100	07/29/17 03:20	
Benzene	ug/L	ND	5.0	07/29/17 03:20	
Bromobenzene	ug/L	ND	5.0	07/29/17 03:20	
Bromochloromethane	ug/L	ND	5.0	07/29/17 03:20	
Bromodichloromethane	ug/L	ND	5.0	07/29/17 03:20	
Bromoform	ug/L	ND	5.0	07/29/17 03:20	
Bromomethane	ug/L	ND	5.0	07/29/17 03:20	
Carbon disulfide	ug/L	ND	10.0	07/29/17 03:20	
Carbon tetrachloride	ug/L	ND	5.0	07/29/17 03:20	
Chlorobenzene	ug/L	ND	5.0	07/29/17 03:20	
Chloroethane	ug/L	ND	5.0	07/29/17 03:20	
Chloroform	ug/L	ND	5.0	07/29/17 03:20	

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REPORT OF LABORATORY ANALYSIS



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QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176347

METHOD BLANK: 1837351 Matrix: Water

Associated Lab Samples: 50176347013, 50176347014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	ug/L	ND	5.0	07/29/17 03:20	
cis-1,2-Dichloroethene	ug/L	ND	5.0	07/29/17 03:20	
cis-1,3-Dichloropropene	ug/L	ND	5.0	07/29/17 03:20	
Dibromochloromethane	ug/L	ND	5.0	07/29/17 03:20	
Dibromomethane	ug/L	ND	5.0	07/29/17 03:20	
Dichlorodifluoromethane	ug/L	ND	5.0	07/29/17 03:20	
Ethyl methacrylate	ug/L	ND	100	07/29/17 03:20	
Ethylbenzene	ug/L	ND	5.0	07/29/17 03:20	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/29/17 03:20	
Iodomethane	ug/L	ND	10.0	07/29/17 03:20	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	07/29/17 03:20	
Methyl-tert-butyl ether	ug/L	ND	4.0	07/29/17 03:20	
Methylene Chloride	ug/L	ND	5.0	07/29/17 03:20	
n-Butylbenzene	ug/L	ND	5.0	07/29/17 03:20	
n-Hexane	ug/L	ND	5.0	07/29/17 03:20	
n-Propylbenzene	ug/L	ND	5.0	07/29/17 03:20	
Naphthalene	ug/L	ND	1.7	07/29/17 03:20	
p-Isopropyltoluene	ug/L	ND	5.0	07/29/17 03:20	
sec-Butylbenzene	ug/L	ND	5.0	07/29/17 03:20	
Styrene	ug/L	ND	5.0	07/29/17 03:20	
tert-Butylbenzene	ug/L	ND	5.0	07/29/17 03:20	
Tetrachloroethene	ug/L	ND	5.0	07/29/17 03:20	
Toluene	ug/L	ND	5.0	07/29/17 03:20	
trans-1,2-Dichloroethene	ug/L	ND	5.0	07/29/17 03:20	
trans-1,3-Dichloropropene	ug/L	ND	5.0	07/29/17 03:20	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	07/29/17 03:20	
Trichloroethene	ug/L	ND	5.0	07/29/17 03:20	
Trichlorofluoromethane	ug/L	ND	5.0	07/29/17 03:20	
Vinyl acetate	ug/L	ND	50.0	07/29/17 03:20	
Vinyl chloride	ug/L	ND	2.0	07/29/17 03:20	
Xylene (Total)	ug/L	ND	10.0	07/29/17 03:20	
4-Bromofluorobenzene (S)	%.	98	84-113	07/29/17 03:20	
Dibromofluoromethane (S)	%.	102	86-116	07/29/17 03:20	
Toluene-d8 (S)	%.	101	86-111	07/29/17 03:20	

LABORATORY CONTROL SAMPLE: 1837352

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.9	104	80-123	
1,1,1-Trichloroethane	ug/L	50	51.5	103	72-126	
1,1,2,2-Tetrachloroethane	ug/L	50	48.2	96	74-124	
1,1,2-Trichloroethane	ug/L	50	52.2	104	79-121	
1,1-Dichloroethane	ug/L	50	51.7	103	77-122	
1,1-Dichloroethene	ug/L	50	47.2	94	70-131	

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REPORT OF LABORATORY ANALYSIS

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 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

LABORATORY CONTROL SAMPLE: 1837352

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloropropene	ug/L	50	52.4	105	79-124	
1,2,3-Trichlorobenzene	ug/L	50	58.9	118	70-129	
1,2,3-Trichloropropane	ug/L	50	47.3	95	79-128	
1,2,4-Trichlorobenzene	ug/L	50	51.6	103	69-129	
1,2,4-Trimethylbenzene	ug/L	50	51.8	104	76-125	
1,2-Dibromoethane (EDB)	ug/L	50	50.9	102	81-123	
1,2-Dichlorobenzene	ug/L	50	49.8	100	77-118	
1,2-Dichloroethane	ug/L	50	45.7	91	72-119	
1,2-Dichloropropane	ug/L	50	50.5	101	78-125	
1,3,5-Trimethylbenzene	ug/L	50	53.2	106	79-123	
1,3-Dichlorobenzene	ug/L	50	49.9	100	74-120	
1,3-Dichloropropane	ug/L	50	55.8	112	80-127	
1,4-Dichlorobenzene	ug/L	50	48.9	98	72-118	
1-Methylnaphthalene	ug/L	50	40.1	80	64-134 N2	
2,2-Dichloropropane	ug/L	50	40.7	81	41-145	
2-Butanone (MEK)	ug/L	250	310	124	61-150	
2-Chlorotoluene	ug/L	50	49.2	98	77-119	
2-Hexanone	ug/L	250	296	118	67-141	
2-Methylnaphthalene	ug/L	50	43.1	86	53-112	
4-Chlorotoluene	ug/L	50	51.4	103	75-123	
4-Methyl-2-pentanone (MIBK)	ug/L	250	295	118	71-131	
Acetone	ug/L	250	270	108	39-166	
Acrolein	ug/L	1000	771	77	22-200	
Acrylonitrile	ug/L	200	230	115	62-130	
Benzene	ug/L	50	51.0	102	79-120	
Bromobenzene	ug/L	50	53.6	107	76-121	
Bromochloromethane	ug/L	50	57.5	115	69-136	
Bromodichloromethane	ug/L	50	48.1	96	76-125	
Bromoform	ug/L	50	46.2	92	69-119	
Bromomethane	ug/L	50	52.9	106	27-161	
Carbon disulfide	ug/L	50	51.8	104	60-130	
Carbon tetrachloride	ug/L	50	52.4	105	74-132	
Chlorobenzene	ug/L	50	49.4	99	77-116	
Chloroethane	ug/L	50	56.6	113	51-132	
Chloroform	ug/L	50	50.0	100	76-118	
Chloromethane	ug/L	50	51.6	103	46-126	
cis-1,2-Dichloroethene	ug/L	50	51.4	103	74-126	
cis-1,3-Dichloropropene	ug/L	50	51.9	104	78-125	
Dibromochloromethane	ug/L	50	52.9	106	80-123	
Dibromomethane	ug/L	50	49.3	99	75-124	
Dichlorodifluoromethane	ug/L	50	46.7	93	42-152	
Ethyl methacrylate	ug/L	200	237	119	75-136	
Ethylbenzene	ug/L	50	52.4	105	80-123	
Hexachloro-1,3-butadiene	ug/L	50	51.9	104	74-127	
Iodomethane	ug/L	100	113	113	43-156	
Isopropylbenzene (Cumene)	ug/L	50	51.4	103	80-122	
Methyl-tert-butyl ether	ug/L	50	50.0	100	63-131	

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

LABORATORY CONTROL SAMPLE: 1837352

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	50	45.1	90	62-126	
n-Butylbenzene	ug/L	50	53.5	107	75-123	
n-Hexane	ug/L	50	49.4	99	66-129	
n-Propylbenzene	ug/L	50	51.5	103	79-128	
Naphthalene	ug/L	50	59.0	118	66-130	
p-Isopropyltoluene	ug/L	50	52.4	105	79-124	
sec-Butylbenzene	ug/L	50	52.2	104	80-126	
Styrene	ug/L	50	54.0	108	81-125	
tert-Butylbenzene	ug/L	50	43.1	86	62-106	
Tetrachloroethene	ug/L	50	49.5	99	74-119	
Toluene	ug/L	50	52.0	104	77-117	
trans-1,2-Dichloroethene	ug/L	50	50.9	102	74-128	
trans-1,3-Dichloropropene	ug/L	50	51.2	102	75-132	
trans-1,4-Dichloro-2-butene	ug/L	200	149	75	42-134	
Trichloroethene	ug/L	50	49.4	99	75-119	
Trichlorofluoromethane	ug/L	50	54.6	109	57-152	
Vinyl acetate	ug/L	200	238	119	71-148	
Vinyl chloride	ug/L	50	52.4	105	62-137	
Xylene (Total)	ug/L	150	153	102	79-121	
4-Bromofluorobenzene (S)	%.			104	84-113	
Dibromofluoromethane (S)	%.			98	86-116	
Toluene-d8 (S)	%.			101	86-111	

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176347

QC Batch:	399134	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics

Associated Lab Samples: 50176347001, 50176347002, 50176347003, 50176347004, 50176347005, 50176347006, 50176347007

METHOD BLANK: 1838074 Matrix: Solid

Associated Lab Samples: 50176347001, 50176347002, 50176347003, 50176347004, 50176347005, 50176347006, 50176347007

Parameter	Units	Blank	Reporting		
		Result	Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	07/31/17 14:24	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	07/31/17 14:24	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	07/31/17 14:24	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	07/31/17 14:24	
1,1-Dichloroethane	mg/kg	ND	0.0050	07/31/17 14:24	
1,1-Dichloroethene	mg/kg	ND	0.0050	07/31/17 14:24	
1,1-Dichloropropene	mg/kg	ND	0.0050	07/31/17 14:24	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	07/31/17 14:24	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	07/31/17 14:24	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	07/31/17 14:24	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	07/31/17 14:24	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	07/31/17 14:24	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	07/31/17 14:24	
1,2-Dichloroethane	mg/kg	ND	0.0050	07/31/17 14:24	
1,2-Dichloropropane	mg/kg	ND	0.0050	07/31/17 14:24	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	07/31/17 14:24	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	07/31/17 14:24	
1,3-Dichloropropane	mg/kg	ND	0.0050	07/31/17 14:24	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	07/31/17 14:24	
1-Methylnaphthalene	mg/kg	ND	0.010	07/31/17 14:24	N2
2,2-Dichloropropane	mg/kg	ND	0.0050	07/31/17 14:24	
2-Butanone (MEK)	mg/kg	ND	0.025	07/31/17 14:24	
2-Chlorotoluene	mg/kg	ND	0.0050	07/31/17 14:24	
2-Hexanone	mg/kg	ND	0.10	07/31/17 14:24	
2-Methylnaphthalene	mg/kg	ND	0.010	07/31/17 14:24	
4-Chlorotoluene	mg/kg	ND	0.0050	07/31/17 14:24	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	07/31/17 14:24	
Acetone	mg/kg	ND	0.10	07/31/17 14:24	
Acrolein	mg/kg	ND	0.10	07/31/17 14:24	
Acrylonitrile	mg/kg	ND	0.10	07/31/17 14:24	
Benzene	mg/kg	ND	0.0050	07/31/17 14:24	
Bromobenzene	mg/kg	ND	0.0050	07/31/17 14:24	
Bromochloromethane	mg/kg	ND	0.0050	07/31/17 14:24	
Bromodichloromethane	mg/kg	ND	0.0050	07/31/17 14:24	
Bromoform	mg/kg	ND	0.0050	07/31/17 14:24	
Bromomethane	mg/kg	ND	0.0050	07/31/17 14:24	
Carbon disulfide	mg/kg	ND	0.010	07/31/17 14:24	
Carbon tetrachloride	mg/kg	ND	0.0050	07/31/17 14:24	
Chlorobenzene	mg/kg	ND	0.0050	07/31/17 14:24	
Chloroethane	mg/kg	ND	0.0050	07/31/17 14:24	
Chloroform	mg/kg	ND	0.0050	07/31/17 14:24	

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REPORT OF LABORATORY ANALYSIS

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 7726 Moller Road
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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

METHOD BLANK: 1838074 Matrix: Solid
 Associated Lab Samples: 50176347001, 50176347002, 50176347003, 50176347004, 50176347005, 50176347006, 50176347007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	mg/kg	ND	0.0050	07/31/17 14:24	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	07/31/17 14:24	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	07/31/17 14:24	
Dibromochloromethane	mg/kg	ND	0.0050	07/31/17 14:24	
Dibromomethane	mg/kg	ND	0.0050	07/31/17 14:24	
Dichlorodifluoromethane	mg/kg	ND	0.0050	07/31/17 14:24	
Ethyl methacrylate	mg/kg	ND	0.10	07/31/17 14:24	
Ethylbenzene	mg/kg	ND	0.0050	07/31/17 14:24	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	07/31/17 14:24	
Iodomethane	mg/kg	ND	0.10	07/31/17 14:24	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	07/31/17 14:24	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	07/31/17 14:24	
Methylene Chloride	mg/kg	ND	0.020	07/31/17 14:24	
n-Butylbenzene	mg/kg	ND	0.0050	07/31/17 14:24	
n-Hexane	mg/kg	ND	0.0050	07/31/17 14:24	
n-Propylbenzene	mg/kg	ND	0.0050	07/31/17 14:24	
Naphthalene	mg/kg	ND	0.0050	07/31/17 14:24	
p-Isopropyltoluene	mg/kg	ND	0.0050	07/31/17 14:24	
sec-Butylbenzene	mg/kg	ND	0.0050	07/31/17 14:24	
Styrene	mg/kg	ND	0.0050	07/31/17 14:24	
tert-Butylbenzene	mg/kg	ND	0.0050	07/31/17 14:24	
Tetrachloroethene	mg/kg	ND	0.0050	07/31/17 14:24	
Toluene	mg/kg	ND	0.0050	07/31/17 14:24	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	07/31/17 14:24	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	07/31/17 14:24	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	07/31/17 14:24	
Trichloroethene	mg/kg	ND	0.0050	07/31/17 14:24	
Trichlorofluoromethane	mg/kg	ND	0.0050	07/31/17 14:24	
Vinyl acetate	mg/kg	ND	0.10	07/31/17 14:24	
Vinyl chloride	mg/kg	ND	0.0050	07/31/17 14:24	
Xylene (Total)	mg/kg	ND	0.010	07/31/17 14:24	
4-Bromofluorobenzene (S)	%.	98	51-142	07/31/17 14:24	
Dibromofluoromethane (S)	%.	102	69-136	07/31/17 14:24	
Toluene-d8 (S)	%.	97	64-150	07/31/17 14:24	

LABORATORY CONTROL SAMPLE: 1838075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	.05	0.045	90	76-126	
1,1,1-Trichloroethane	mg/kg	.05	0.042	84	72-126	
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.045	89	68-125	
1,1,2-Trichloroethane	mg/kg	.05	0.043	86	72-124	
1,1-Dichloroethane	mg/kg	.05	0.042	84	78-117	
1,1-Dichloroethene	mg/kg	.05	0.035	71	70-132	

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REPORT OF LABORATORY ANALYSIS



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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

LABORATORY CONTROL SAMPLE: 1838075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloropropene	mg/kg	.05	0.044	87	79-121	
1,2,3-Trichlorobenzene	mg/kg	.05	0.045	90	65-117	
1,2,3-Trichloropropane	mg/kg	.05	0.045	90	78-128	
1,2,4-Trichlorobenzene	mg/kg	.05	0.045	89	58-121	
1,2,4-Trimethylbenzene	mg/kg	.05	0.044	89	70-118	
1,2-Dibromoethane (EDB)	mg/kg	.05	0.047	93	76-127	
1,2-Dichlorobenzene	mg/kg	.05	0.044	87	72-114	
1,2-Dichloroethane	mg/kg	.05	0.045	89	70-119	
1,2-Dichloropropane	mg/kg	.05	0.045	89	76-122	
1,3,5-Trimethylbenzene	mg/kg	.05	0.044	88	71-122	
1,3-Dichlorobenzene	mg/kg	.05	0.043	85	70-115	
1,3-Dichloropropane	mg/kg	.05	0.048	95	76-130	
1,4-Dichlorobenzene	mg/kg	.05	0.042	84	68-113	
1-Methylnaphthalene	mg/kg	.05	0.049	98	66-129 N2	
2,2-Dichloropropane	mg/kg	.05	0.044	88	66-125	
2-Butanone (MEK)	mg/kg	.25	0.24	97	56-161	
2-Chlorotoluene	mg/kg	.05	0.042	83	69-122	
2-Hexanone	mg/kg	.25	0.24	97	67-141	
2-Methylnaphthalene	mg/kg	.05	0.051	102	59-115	
4-Chlorotoluene	mg/kg	.05	0.044	88	70-118	
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.23	92	72-125	
Acetone	mg/kg	.25	0.28	113	24-194	
Acrolein	mg/kg	1	0.99	99	23-200	
Acrylonitrile	mg/kg	.2	0.17	86	70-122	
Benzene	mg/kg	.05	0.042	84	75-119	
Bromobenzene	mg/kg	.05	0.044	88	73-119	
Bromochloromethane	mg/kg	.05	0.044	89	73-117	
Bromodichloromethane	mg/kg	.05	0.044	88	73-120	
Bromoform	mg/kg	.05	0.044	88	65-121	
Bromomethane	mg/kg	.05	0.042	84	28-161	
Carbon disulfide	mg/kg	.05	0.028	57	64-115 L2	
Carbon tetrachloride	mg/kg	.05	0.046	92	74-130	
Chlorobenzene	mg/kg	.05	0.042	84	75-114	
Chloroethane	mg/kg	.05	0.045	89	46-129	
Chloroform	mg/kg	.05	0.040	81	71-114	
Chloromethane	mg/kg	.05	0.040	80	39-121	
cis-1,2-Dichloroethene	mg/kg	.05	0.041	82	79-121	
cis-1,3-Dichloropropene	mg/kg	.05	0.048	96	73-132	
Dibromochloromethane	mg/kg	.05	0.045	91	73-123	
Dibromomethane	mg/kg	.05	0.044	88	79-119	
Dichlorodifluoromethane	mg/kg	.05	0.043	87	44-155	
Ethyl methacrylate	mg/kg	.2	0.21	105	74-136	
Ethylbenzene	mg/kg	.05	0.044	87	73-121	
Hexachloro-1,3-butadiene	mg/kg	.05	0.040	80	65-131	
Iodomethane	mg/kg	.1	.078J	78	44-168	
Isopropylbenzene (Cumene)	mg/kg	.05	0.044	88	72-122	
Methyl-tert-butyl ether	mg/kg	.05	0.049	97	74-121	

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

LABORATORY CONTROL SAMPLE: 1838075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	mg/kg	.05	0.041	81	61-140	
n-Butylbenzene	mg/kg	.05	0.042	84	64-125	
n-Hexane	mg/kg	.05	0.041	83	69-116	
n-Propylbenzene	mg/kg	.05	0.044	88	70-127	
Naphthalene	mg/kg	.05	0.046	92	65-122	
p-Isopropyltoluene	mg/kg	.05	0.044	87	71-123	
sec-Butylbenzene	mg/kg	.05	0.044	89	72-129	
Styrene	mg/kg	.05	0.046	91	72-127	
tert-Butylbenzene	mg/kg	.05	0.034	69	57-108	
Tetrachloroethene	mg/kg	.05	0.040	80	68-120	
Toluene	mg/kg	.05	0.041	83	71-114	
trans-1,2-Dichloroethene	mg/kg	.05	0.049	98	76-125	
trans-1,3-Dichloropropene	mg/kg	.05	0.050	100	69-133	
trans-1,4-Dichloro-2-butene	mg/kg	.2	0.19	95	58-132	
Trichloroethene	mg/kg	.05	0.042	83	77-115	
Trichlorofluoromethane	mg/kg	.05	0.045	91	61-142	
Vinyl acetate	mg/kg	.2	0.21	104	64-139	
Vinyl chloride	mg/kg	.05	0.045	91	66-139	
Xylene (Total)	mg/kg	.15	0.13	89	71-119	
4-Bromofluorobenzene (S)	%.			103	51-142	
Dibromofluoromethane (S)	%.			96	69-136	
Toluene-d8 (S)	%.			100	64-150	

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176347

QC Batch:	399155	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	50176347008, 50176347009		

METHOD BLANK: 1838144 Matrix: Solid

Associated Lab Samples: 50176347008, 50176347009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	08/01/17 15:31	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	08/01/17 15:31	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	08/01/17 15:31	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	08/01/17 15:31	
1,1-Dichloroethane	mg/kg	ND	0.0050	08/01/17 15:31	
1,1-Dichloroethene	mg/kg	ND	0.0050	08/01/17 15:31	
1,1-Dichloropropene	mg/kg	ND	0.0050	08/01/17 15:31	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	08/01/17 15:31	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	08/01/17 15:31	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	08/01/17 15:31	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	08/01/17 15:31	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	08/01/17 15:31	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	08/01/17 15:31	
1,2-Dichloroethane	mg/kg	ND	0.0050	08/01/17 15:31	
1,2-Dichloropropane	mg/kg	ND	0.0050	08/01/17 15:31	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	08/01/17 15:31	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	08/01/17 15:31	
1,3-Dichloropropane	mg/kg	ND	0.0050	08/01/17 15:31	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	08/01/17 15:31	
1-Methylnaphthalene	mg/kg	ND	0.010	08/01/17 15:31	N2
2,2-Dichloropropane	mg/kg	ND	0.0050	08/01/17 15:31	
2-Butanone (MEK)	mg/kg	ND	0.025	08/01/17 15:31	
2-Chlorotoluene	mg/kg	ND	0.0050	08/01/17 15:31	
2-Hexanone	mg/kg	ND	0.10	08/01/17 15:31	
2-Methylnaphthalene	mg/kg	ND	0.010	08/01/17 15:31	
4-Chlorotoluene	mg/kg	ND	0.0050	08/01/17 15:31	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	08/01/17 15:31	
Acetone	mg/kg	ND	0.10	08/01/17 15:31	
Acrolein	mg/kg	ND	0.10	08/01/17 15:31	
Acrylonitrile	mg/kg	ND	0.10	08/01/17 15:31	
Benzene	mg/kg	ND	0.0050	08/01/17 15:31	
Bromobenzene	mg/kg	ND	0.0050	08/01/17 15:31	
Bromochloromethane	mg/kg	ND	0.0050	08/01/17 15:31	
Bromodichloromethane	mg/kg	ND	0.0050	08/01/17 15:31	
Bromoform	mg/kg	ND	0.0050	08/01/17 15:31	
Bromomethane	mg/kg	ND	0.0050	08/01/17 15:31	
Carbon disulfide	mg/kg	ND	0.010	08/01/17 15:31	
Carbon tetrachloride	mg/kg	ND	0.0050	08/01/17 15:31	
Chlorobenzene	mg/kg	ND	0.0050	08/01/17 15:31	
Chloroethane	mg/kg	ND	0.0050	08/01/17 15:31	
Chloroform	mg/kg	ND	0.0050	08/01/17 15:31	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176347

METHOD BLANK: 1838144

Matrix: Solid

Associated Lab Samples: 50176347008, 50176347009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	mg/kg	ND	0.0050	08/01/17 15:31	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	08/01/17 15:31	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	08/01/17 15:31	
Dibromochloromethane	mg/kg	ND	0.0050	08/01/17 15:31	
Dibromomethane	mg/kg	ND	0.0050	08/01/17 15:31	
Dichlorodifluoromethane	mg/kg	ND	0.0050	08/01/17 15:31	
Ethyl methacrylate	mg/kg	ND	0.10	08/01/17 15:31	
Ethylbenzene	mg/kg	ND	0.0050	08/01/17 15:31	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	08/01/17 15:31	
Iodomethane	mg/kg	ND	0.10	08/01/17 15:31	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	08/01/17 15:31	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	08/01/17 15:31	
Methylene Chloride	mg/kg	ND	0.020	08/01/17 15:31	
n-Butylbenzene	mg/kg	ND	0.0050	08/01/17 15:31	
n-Hexane	mg/kg	ND	0.0050	08/01/17 15:31	
n-Propylbenzene	mg/kg	ND	0.0050	08/01/17 15:31	
Naphthalene	mg/kg	ND	0.0050	08/01/17 15:31	
p-Isopropyltoluene	mg/kg	ND	0.0050	08/01/17 15:31	
sec-Butylbenzene	mg/kg	ND	0.0050	08/01/17 15:31	
Styrene	mg/kg	ND	0.0050	08/01/17 15:31	
tert-Butylbenzene	mg/kg	ND	0.0050	08/01/17 15:31	
Tetrachloroethene	mg/kg	ND	0.0050	08/01/17 15:31	
Toluene	mg/kg	ND	0.0050	08/01/17 15:31	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	08/01/17 15:31	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	08/01/17 15:31	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	08/01/17 15:31	
Trichloroethene	mg/kg	ND	0.0050	08/01/17 15:31	
Trichlorofluoromethane	mg/kg	ND	0.0050	08/01/17 15:31	
Vinyl acetate	mg/kg	ND	0.10	08/01/17 15:31	
Vinyl chloride	mg/kg	ND	0.0050	08/01/17 15:31	
Xylene (Total)	mg/kg	ND	0.010	08/01/17 15:31	
4-Bromofluorobenzene (S)	%.	96	51-142	08/01/17 15:31	
Dibromofluoromethane (S)	%.	101	69-136	08/01/17 15:31	
Toluene-d8 (S)	%.	97	64-150	08/01/17 15:31	

LABORATORY CONTROL SAMPLE: 1838145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	.05	0.042	85	72-126	
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.043	86	68-125	
1,1-Dichloroethene	mg/kg	.05	0.038	75	70-132	
1,2,4-Trimethylbenzene	mg/kg	.05	0.045	90	70-118	
1,2-Dichloropropane	mg/kg	.05	0.045	90	76-122	
Benzene	mg/kg	.05	0.043	86	75-119	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

LABORATORY CONTROL SAMPLE: 1838145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorobenzene	mg/kg	.05	0.042	83	75-114	
Chloroform	mg/kg	.05	0.041	81	71-114	
cis-1,2-Dichloroethene	mg/kg	.05	0.041	83	79-121	
cis-1,3-Dichloropropene	mg/kg	.05	0.047	94	73-132	
Ethylbenzene	mg/kg	.05	0.043	87	73-121	
Isopropylbenzene (Cumene)	mg/kg	.05	0.045	89	72-122	
Methyl-tert-butyl ether	mg/kg	.05	0.040	80	74-121	
Naphthalene	mg/kg	.05	0.045	89	65-122	
Tetrachloroethene	mg/kg	.05	0.041	81	68-120	
Toluene	mg/kg	.05	0.042	84	71-114	
trans-1,2-Dichloroethene	mg/kg	.05	0.044	87	76-125	
trans-1,3-Dichloropropene	mg/kg	.05	0.049	98	69-133	
Trichloroethene	mg/kg	.05	0.043	85	77-115	
Vinyl chloride	mg/kg	.05	0.049	98	66-139	
Xylene (Total)	mg/kg	.15	0.13	89	71-119	
4-Bromofluorobenzene (S)	%.			102	51-142	
Dibromofluoromethane (S)	%.			97	69-136	
Toluene-d8 (S)	%.			99	64-150	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176347

QC Batch:	399824	Analysis Method:	SM 2540G
QC Batch Method:	SM 2540G	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	50176347001, 50176347002, 50176347003, 50176347004, 50176347005, 50176347006, 50176347007, 50176347008, 50176347009		

SAMPLE DUPLICATE: 1840902

Parameter	Units	50176347001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.7	13.0	12	5	R1

SAMPLE DUPLICATE: 1840903

Parameter	Units	50176350002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.3	25.1	1	5	

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALIFIERS

Project: Houghland Add. Investigation

Pace Project No.: 50176347

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

N2 The lab does not hold NELAC/TNI accreditation for this parameter.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Houghland Add. Investigation
 Pace Project No.: 50176347

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50176347010	PB 40 (29-33)	EPA 8260	398889		
50176347011	PB 40 (15-19)	EPA 8260	398889		
50176347012	Dup GW	EPA 8260	398889		
50176347013	PB 40 (6-10)	EPA 8260	398930		
50176347014	Trip Blank	EPA 8260	398930		
50176347001	PB 34 (0-2)	EPA 8260	399134		
50176347002	PB 34 (13-15)	EPA 8260	399134		
50176347003	PB 35 (0-2)	EPA 8260	399134		
50176347004	PB 35 (13-15)	EPA 8260	399134		
50176347005	Dup	EPA 8260	399134		
50176347006	PB 36 (0-2)	EPA 8260	399134		
50176347007	PB 36 (8-10)	EPA 8260	399134		
50176347008	PB 37 (0-2)	EPA 8260	399155		
50176347009	PB 37 (8-10)	EPA 8260	399155		
50176347001	PB 34 (0-2)	SM 2540G	399824		
50176347002	PB 34 (13-15)	SM 2540G	399824		
50176347003	PB 35 (0-2)	SM 2540G	399824		
50176347004	PB 35 (13-15)	SM 2540G	399824		
50176347005	Dup	SM 2540G	399824		
50176347006	PB 36 (0-2)	SM 2540G	399824		
50176347007	PB 36 (8-10)	SM 2540G	399824		
50176347008	PB 37 (0-2)	SM 2540G	399824		
50176347009	PB 37 (8-10)	SM 2540G	399824		

REPORT OF LABORATORY ANALYSIS



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

***Important Note:** By signing this form you are accepting Peet's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:

Company Name:
PACEROT ENVIRONMENT
Address:
6150 E 75th St
Email To:
McGasper@pacero.com
Fax:
Phone:
Requested Due Date/TAT:
STANDARD

Section B Required Project Information:

Report To:
JAMES COPE
Copy To:
JAMES COPE
Purchase Order No.:
**Project Name:
PACEROT ADDITIONAL INVESTIGATION**
Project Number:
17-0295-016

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote
Reference:
Pace Project Manager:
Pace Profile #:

Section D Required Client Information

Matrix Codes
MATRIX CODE

Drinking Water DW
Water WWT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

SAMPLE ID
(A-Z, 0-9, -)
Sample IDs MUST BE UNIQUE

ITEM

SAMPLE NAME	DATE	TIME	DATE	TIME	# OF CONTAINERS		U/Preservative	Preservatives	Y/N	Analysis Test	Y/N	Residual Chlorine (Y/N)	Site Location	STATE:	REGULATORY AGENCY	NPDES	GROUND WATER	DRINKING WATER	RCRA	OTHER
					COLLECTED	COMPOSITE														
1 0245 (6-10)	6/15/17	16:20	3	-																
2 0245 BLANK	6/15/17	-	3	-																
3 0245	6/15/17	-	3	-																
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
ADDITIONAL COMMENTS		REINQUISITION BY / AFFILIATION		DATE		ACCEPTED BY / AFFILIATION		DATE		TIME		TIME		SAMPLE CONDITIONS		DATE		TIME		
ABSOLUTE PRICING		JAMES COPE		7/17/17		947		7/17/17		16:20		16:20		7/17/17		16:20				
DETAILED ANALYSIS		NO YES		NO		YES		NO		YES		NO		NO		NO				
SAMPLES		ORIGINAL		SAMPLER NAME AND SIGNATURE		JAMES COPE		PRINT Name of SAMPLER:		JAMES COPE		SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY):		07/17/17				
Temp In °C		Customer Coolant (Y/N)		Samples intact (Y/N)		Received on (MM/DD/YY)		Received by (MM/DD/YY)		Temp Project No./Lab I.D.		Temp		TIME		TIME				

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt

Pace Analytical

Project # 50176347

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: yes no **Seals intact:** yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 34°/34° **Ice Visible in Sample Containers:** yes no

~~(Initial/Corrected) Temp should be above freezing to 6°C~~

Date/Time and Initials of person examining contents:		7/27/17	- 70	Comments
Are samples from West Virginia?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1.	
Document any containers out of temp.				
Chain of Custody Present:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.	
Chain of Custody Filled Out:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.	
Short Hold Time Analysis (<72hr):		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8260	Date/Time 5035A T/C placed in Freezer: _____ Short Holds Taken to Lab: _____
Rush Turn Around Time Requested:		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4.	
Containers Intact:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.	
Sample Labels match COC: -Includes date/time/ID/Analysis		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.	
All containers needing acid/base pres. have been checked? exceptions: VOA, coliform, O&G		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	7.	(Circle) HNO3 H2SO4 NaOH NaOH/ZnAc
All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.				
Residual Chlorine Check (SVOC 625 Pest/PCB 608)		8.	Present	Absent
Residual Chlorine Check (Total/Amenable/Free Cyanide)		9.	Present	Absent
Headspace in VOA Vials (>6mm):		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	All water vials have head space
Headspace Wisconsin Sulfide		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Present:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.	
Custody Seals		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13.	

Client Notification/ Resolution:

Person Contacted: _____ **Date/Time:** _____

Comments/ Resolution:

Sample Container Count

CLIENT: Retriev Eng.

COC PAGE 1 of 2
COC ID# 20972288

Project # SD176347

SSS
S
S

Line

Item

		AG1U	WGFU	AGOU	R	BP2N	BP2U	BP3S	BP3U	AG3S	AG1H	BP3B	BP1U	SP5T	AG2U	DG9U
1		4														SL
2		4														
3		4														
4		4														
5		4														
6		4														
7		4														
8		4														
9		4														
10																
11																
12																

Container Codes

DG9H	40mL HCl amber vial	AGOU	100mL unpreserved amber glass	BP1N	1 liter HNO3 plastic	DG9P	40mL TSP amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCl amber glass	BP1S	1 liter H2SO4 plastic	DG9S	40mL H2SO4 amber vial
WG FU	1liter H2SO4 amber glass	AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	DG9T	40mL Na Thio amber vial
R terra core kit	1liter Na Thiosulfate amber glass	AG1T	1 liter Na Thiosulfate amber glass	BP1Z	1 liter NaOH, Zn, Ac	DGGU	40mL unpreserved amber vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	SP5T	120mL Coliform Na Thiosulfate
BP2U	500mL H2SO4 amber glass	AG2S	500mL H2SO4 amber glass	BP2O	500mL NaOH plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber glass	BP2Z	500mL NaOH, Zn Ac	U Summa Can	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber glass	AF	Air Filter	VGGH	40mL HCl clear vial
BP3U	250mL unpreserved plastic	BG1H	1 liter HCl clear glass	BP3B	250mL NaOH plastic	VGGT	40mL Na Thio, clear vial
BP3S	250mL H2SO4 plastic	BG1S	1 liter H2SO4 clear glass	BP3Z	250mL NaOH, Zn Ac plastic	VGGU	40mL unpreserved clear vial
AG3S	250mL H2SO4 glass amber	BG1T	1 liter Na Thiosulfate clear glass	C Air Cassettes		VSG	Headspace septa vial & HCL
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	DG9B	40mL Na Bisulfite amber vial	WGFX	4oz wide jar w/hexane wipe
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag

Sample Container Count

CLIENT:

Peter Eng

COC PAGE 2 of 2
COC ID# 1951280SS Project # S0176347

Sample Line

Item	AG1U	WGFU	AG0U	R	BP2N	BP2U	BP3S	BP3U	BP3S	AG3S	AG1H	BP3B	BP1U	SP5T	AG2U	D67U	pH <2	pH >9	pH >12
1																WT			
2																WT			
3																3			
4																3			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Matrix SW/NAL
(Soil/Water/Non-
Aqueous Liquid)

Container Codes

DG9H	40mL HCl amber vial	AG0U	100mL unpreserved amber glass	BP1N	1 liter HNO3 plastic	DG9P	40mL TSP amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCl amber glass	BP1S	1 liter H ₂ SO ₄ plastic	DG9S	40mL H ₂ SO ₄ amber vial
WGFU	4oz clear soil jar	AG1S	1 liter H ₂ SO ₄ amber glass	BP1U	1 liter unpreserved plastic	DG9T	40mL Na Thio amber vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber glass	BP1Z	1 liter NaOH, Zn, Ac	DG9U	40mL unpreserved amber vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	SP5T	120mL Coliform Na Thiosulfate
BP2U	500mL unpreserved plastic	AG2S	500mL H ₂ SO ₄ amber glass	BP2O	500mL NaOH plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H ₂ SO ₄ plastic	AG2U	500mL unpreserved amber glass	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber glass	AF	Air Filter	VG9H	40mL HCl clear vial
BP3U	250mL unpreserved plastic	BG1H	1 liter HCl clear glass	BP3B	250mL NaOH plastic	VG9T	40mL Na Thio. clear vial
BP3S	250mL H ₂ SO ₄ plastic	BG1S	1 liter H ₂ SO ₄ clear glass	BP3Z	250mL NaOH, Zn Ac plastic	VG9U	40mL unpreserved clear vial
AG3S	250mL H ₂ SO ₄ glass amber	BG1T	1 liter Na Thiosulfate clear glass	C	Air Cassettes	VSG	Headspace septa vial & HCL
AG1S	1 liter H ₂ SO ₄ amber glass	BG1U	1 liter unpreserved glass	DG9B	40mL Na Bisulfate amber vial	WGFX	4oz wide jar w/hexane wipe
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag



Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

August 08, 2017

Mr. Mike Casper
Patriot Engineering
6150 E. 75th St.
Indianapolis, IN 46250

RE: Project: Houghland Add. Investigation
Pace Project No.: 50176495

Dear Mr. Casper:

Enclosed are the analytical results for sample(s) received by the laboratory on July 28, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive ink that reads "Tina Sayer".

Tina Sayer
tina.sayer@pacelabs.com
(317)228-3100
Project Manager

Enclosures

cc: Mr. James Cody, Patriot Engineering



REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
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CERTIFICATIONS

Project: Houghland Add. Investigation
Pace Project No.: 50176495

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 003971
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WV Certification #: 98019

Ohio VAP Certification #: CL-0065
Oklahoma Certification #: 2016-075
Texas Certification #: T104704355-16-10
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

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SAMPLE SUMMARY

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50176495001	PB 38 (0-2)	Solid	07/28/17 07:45	07/28/17 14:00
50176495002	PB 38 (8-10)	Solid	07/28/17 07:50	07/28/17 14:00
50176495003	PB 39 (0-2)	Solid	07/28/17 08:15	07/28/17 14:00
50176495004	PB 39 (3-5)	Solid	07/28/17 08:20	07/28/17 14:00
50176495005	PB 41 (30-34)	Water	07/28/17 10:15	07/28/17 14:00
50176495006	PB 41 (24-28)	Water	07/28/17 10:20	07/28/17 14:00
50176495007	PB 41 (15-20)	Water	07/28/17 10:25	07/28/17 14:00
50176495008	Trip Blank	Water	07/28/17 08:00	07/28/17 14:00

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SAMPLE ANALYTE COUNT

Project: Houghland Add. Investigation
Pace Project No.: 50176495

Lab ID	Sample ID	Method	Analysts	Analytes Reported
50176495001	PB 38 (0-2)	EPA 8260	JLZ	75
		SM 2540G	SCM	1
50176495002	PB 38 (8-10)	EPA 8260	JLZ	75
		SM 2540G	SCM	1
50176495003	PB 39 (0-2)	EPA 8260	JLZ	75
		SM 2540G	SCM	1
50176495004	PB 39 (3-5)	EPA 8260	JLZ	75
		SM 2540G	SCM	1
50176495005	PB 41 (30-34)	EPA 8260	JLZ	75
50176495006	PB 41 (24-28)	EPA 8260	JLZ	75
50176495007	PB 41 (15-20)	EPA 8260	JLZ	75
50176495008	Trip Blank	EPA 8260	JLZ	75

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SUMMARY OF DETECTION

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50176495001	PB 38 (0-2)					
EPA 8260	Tetrachloroethene	0.024	mg/kg	0.0056	08/02/17 07:09	
EPA 8260	Trichloroethene	0.0070	mg/kg	0.0056	08/02/17 07:09	
SM 2540G	Percent Moisture	7.2	%	0.10	08/07/17 13:57	
50176495002	PB 38 (8-10)					
EPA 8260	Tetrachloroethene	0.22	mg/kg	0.0049	08/02/17 07:41	
EPA 8260	Trichloroethene	0.078	mg/kg	0.0049	08/02/17 07:41	
SM 2540G	Percent Moisture	3.8	%	0.10	08/07/17 13:58	
50176495003	PB 39 (0-2)					
SM 2540G	Percent Moisture	18.4	%	0.10	08/07/17 13:58	
50176495004	PB 39 (3-5)					
SM 2540G	Percent Moisture	13.8	%	0.10	08/07/17 13:58	
50176495005	PB 41 (30-34)					
EPA 8260	Tetrachloroethene	18.4	ug/L	5.0	07/31/17 20:00	
EPA 8260	Trichloroethene	21.1	ug/L	5.0	07/31/17 20:00	
50176495006	PB 41 (24-28)					
EPA 8260	Tetrachloroethene	18.4	ug/L	5.0	07/31/17 20:32	
EPA 8260	Trichloroethene	53.4	ug/L	5.0	07/31/17 20:32	
50176495007	PB 41 (15-20)					
EPA 8260	Tetrachloroethene	22.5	ug/L	5.0	07/31/17 21:04	
EPA 8260	Trichloroethene	64.5	ug/L	5.0	07/31/17 21:04	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 38 (0-2) Lab ID: 50176495001 Collected: 07/28/17 07:45 Received: 07/28/17 14:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.11	1		08/02/17 07:09	67-64-1	
Acrolein	ND	mg/kg	0.11	1		08/02/17 07:09	107-02-8	
Acrylonitrile	ND	mg/kg	0.11	1		08/02/17 07:09	107-13-1	
Benzene	ND	mg/kg	0.0056	1		08/02/17 07:09	71-43-2	
Bromobenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	108-86-1	
Bromoform	ND	mg/kg	0.0056	1		08/02/17 07:09	75-25-2	
Bromomethane	ND	mg/kg	0.0056	1		08/02/17 07:09	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.028	1		08/02/17 07:09	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	98-06-6	
Carbon disulfide	ND	mg/kg	0.011	1		08/02/17 07:09	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0056	1		08/02/17 07:09	56-23-5	
Chlorobenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	108-90-7	
Chloroethane	ND	mg/kg	0.0056	1		08/02/17 07:09	75-00-3	
Chloroform	ND	mg/kg	0.0056	1		08/02/17 07:09	67-66-3	
Chloromethane	ND	mg/kg	0.0056	1		08/02/17 07:09	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0056	1		08/02/17 07:09	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0056	1		08/02/17 07:09	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0056	1		08/02/17 07:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0056	1		08/02/17 07:09	106-93-4	
Dibromomethane	ND	mg/kg	0.0056	1		08/02/17 07:09	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.11	1		08/02/17 07:09	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0056	1		08/02/17 07:09	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0056	1		08/02/17 07:09	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0056	1		08/02/17 07:09	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0056	1		08/02/17 07:09	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0056	1		08/02/17 07:09	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0056	1		08/02/17 07:09	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0056	1		08/02/17 07:09	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0056	1		08/02/17 07:09	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0056	1		08/02/17 07:09	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0056	1		08/02/17 07:09	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0056	1		08/02/17 07:09	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0056	1		08/02/17 07:09	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.11	1		08/02/17 07:09	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0056	1		08/02/17 07:09	87-68-3	
n-Hexane	ND	mg/kg	0.0056	1		08/02/17 07:09	110-54-3	
2-Hexanone	ND	mg/kg	0.11	1		08/02/17 07:09	591-78-6	
Iodomethane	ND	mg/kg	0.11	1		08/02/17 07:09	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 38 (0-2) Lab ID: 50176495001 Collected: 07/28/17 07:45 Received: 07/28/17 14:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0056	1		08/02/17 07:09	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0056	1		08/02/17 07:09	99-87-6	
Methylene Chloride	ND	mg/kg	0.022	1		08/02/17 07:09	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.011	1		08/02/17 07:09	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.011	1		08/02/17 07:09	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.028	1		08/02/17 07:09	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0056	1		08/02/17 07:09	1634-04-4	
Naphthalene	ND	mg/kg	0.0056	1		08/02/17 07:09	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	103-65-1	
Styrene	ND	mg/kg	0.0056	1		08/02/17 07:09	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0056	1		08/02/17 07:09	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0056	1		08/02/17 07:09	79-34-5	
Tetrachloroethene	0.024	mg/kg	0.0056	1		08/02/17 07:09	127-18-4	
Toluene	ND	mg/kg	0.0056	1		08/02/17 07:09	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0056	1		08/02/17 07:09	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0056	1		08/02/17 07:09	79-00-5	
Trichloroethene	0.0070	mg/kg	0.0056	1		08/02/17 07:09	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0056	1		08/02/17 07:09	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0056	1		08/02/17 07:09	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0056	1		08/02/17 07:09	108-67-8	
Vinyl acetate	ND	mg/kg	0.11	1		08/02/17 07:09	108-05-4	L2
Vinyl chloride	ND	mg/kg	0.0056	1		08/02/17 07:09	75-01-4	
Xylene (Total)	ND	mg/kg	0.011	1		08/02/17 07:09	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	106	%.	69-136	1		08/02/17 07:09	1868-53-7	
Toluene-d8 (S)	117	%.	64-150	1		08/02/17 07:09	2037-26-5	
4-Bromofluorobenzene (S)	89	%.	51-142	1		08/02/17 07:09	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	7.2	%	0.10	1		08/07/17 13:57		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 38 (8-10) Lab ID: 50176495002 Collected: 07/28/17 07:50 Received: 07/28/17 14:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.098	1		08/02/17 07:41	67-64-1	
Acrolein	ND	mg/kg	0.098	1		08/02/17 07:41	107-02-8	
Acrylonitrile	ND	mg/kg	0.098	1		08/02/17 07:41	107-13-1	
Benzene	ND	mg/kg	0.0049	1		08/02/17 07:41	71-43-2	
Bromobenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	108-86-1	
Bromoform	ND	mg/kg	0.0049	1		08/02/17 07:41	75-25-2	
Bromomethane	ND	mg/kg	0.0049	1		08/02/17 07:41	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.025	1		08/02/17 07:41	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	98-06-6	
Carbon disulfide	ND	mg/kg	0.0098	1		08/02/17 07:41	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0049	1		08/02/17 07:41	56-23-5	
Chlorobenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	108-90-7	
Chloroethane	ND	mg/kg	0.0049	1		08/02/17 07:41	75-00-3	
Chloroform	ND	mg/kg	0.0049	1		08/02/17 07:41	67-66-3	
Chloromethane	ND	mg/kg	0.0049	1		08/02/17 07:41	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0049	1		08/02/17 07:41	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0049	1		08/02/17 07:41	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0049	1		08/02/17 07:41	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0049	1		08/02/17 07:41	106-93-4	
Dibromomethane	ND	mg/kg	0.0049	1		08/02/17 07:41	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.098	1		08/02/17 07:41	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0049	1		08/02/17 07:41	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0049	1		08/02/17 07:41	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0049	1		08/02/17 07:41	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0049	1		08/02/17 07:41	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0049	1		08/02/17 07:41	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0049	1		08/02/17 07:41	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0049	1		08/02/17 07:41	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0049	1		08/02/17 07:41	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0049	1		08/02/17 07:41	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0049	1		08/02/17 07:41	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0049	1		08/02/17 07:41	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0049	1		08/02/17 07:41	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.098	1		08/02/17 07:41	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0049	1		08/02/17 07:41	87-68-3	
n-Hexane	ND	mg/kg	0.0049	1		08/02/17 07:41	110-54-3	
2-Hexanone	ND	mg/kg	0.098	1		08/02/17 07:41	591-78-6	
Iodomethane	ND	mg/kg	0.098	1		08/02/17 07:41	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 38 (8-10) Lab ID: 50176495002 Collected: 07/28/17 07:50 Received: 07/28/17 14:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0049	1		08/02/17 07:41	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0049	1		08/02/17 07:41	99-87-6	
Methylene Chloride	ND	mg/kg	0.020	1		08/02/17 07:41	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.0098	1		08/02/17 07:41	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.0098	1		08/02/17 07:41	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.025	1		08/02/17 07:41	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0049	1		08/02/17 07:41	1634-04-4	
Naphthalene	ND	mg/kg	0.0049	1		08/02/17 07:41	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	103-65-1	
Styrene	ND	mg/kg	0.0049	1		08/02/17 07:41	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0049	1		08/02/17 07:41	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0049	1		08/02/17 07:41	79-34-5	
Tetrachloroethene	0.22	mg/kg	0.0049	1		08/02/17 07:41	127-18-4	
Toluene	ND	mg/kg	0.0049	1		08/02/17 07:41	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0049	1		08/02/17 07:41	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0049	1		08/02/17 07:41	79-00-5	
Trichloroethene	0.078	mg/kg	0.0049	1		08/02/17 07:41	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0049	1		08/02/17 07:41	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0049	1		08/02/17 07:41	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0049	1		08/02/17 07:41	108-67-8	
Vinyl acetate	ND	mg/kg	0.098	1		08/02/17 07:41	108-05-4	L2
Vinyl chloride	ND	mg/kg	0.0049	1		08/02/17 07:41	75-01-4	
Xylene (Total)	ND	mg/kg	0.0098	1		08/02/17 07:41	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%.	69-136	1		08/02/17 07:41	1868-53-7	
Toluene-d8 (S)	106	%.	64-150	1		08/02/17 07:41	2037-26-5	
4-Bromofluorobenzene (S)	93	%.	51-142	1		08/02/17 07:41	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	3.8	%	0.10	1		08/07/17 13:58		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 39 (0-2) Lab ID: 50176495003 Collected: 07/28/17 08:15 Received: 07/28/17 14:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.12	1		08/02/17 08:13	67-64-1	
Acrolein	ND	mg/kg	0.12	1		08/02/17 08:13	107-02-8	
Acrylonitrile	ND	mg/kg	0.12	1		08/02/17 08:13	107-13-1	
Benzene	ND	mg/kg	0.0059	1		08/02/17 08:13	71-43-2	
Bromobenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	108-86-1	
Bromoform	ND	mg/kg	0.0059	1		08/02/17 08:13	74-97-5	
Bromochloromethane	ND	mg/kg	0.0059	1		08/02/17 08:13	75-27-4	
Bromodichloromethane	ND	mg/kg	0.0059	1		08/02/17 08:13	75-25-2	
Bromoform	ND	mg/kg	0.0059	1		08/02/17 08:13	74-83-9	
Bromomethane	ND	mg/kg	0.0059	1		08/02/17 08:13	78-93-3	
2-Butanone (MEK)	ND	mg/kg	0.030	1		08/02/17 08:13	104-51-8	
n-Butylbenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	135-98-8	
sec-Butylbenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	98-06-6	
tert-Butylbenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	124-48-1	
Carbon disulfide	ND	mg/kg	0.012	1		08/02/17 08:13	56-23-5	
Carbon tetrachloride	ND	mg/kg	0.0059	1		08/02/17 08:13	106-93-4	
Chlorobenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	108-90-7	
Chloroethane	ND	mg/kg	0.0059	1		08/02/17 08:13	75-00-3	
Chloroform	ND	mg/kg	0.0059	1		08/02/17 08:13	67-66-3	
Chloromethane	ND	mg/kg	0.0059	1		08/02/17 08:13	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0059	1		08/02/17 08:13	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0059	1		08/02/17 08:13	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0059	1		08/02/17 08:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0059	1		08/02/17 08:13	106-93-4	
Dibromomethane	ND	mg/kg	0.0059	1		08/02/17 08:13	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.12	1		08/02/17 08:13	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0059	1		08/02/17 08:13	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0059	1		08/02/17 08:13	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0059	1		08/02/17 08:13	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0059	1		08/02/17 08:13	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0059	1		08/02/17 08:13	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0059	1		08/02/17 08:13	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0059	1		08/02/17 08:13	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0059	1		08/02/17 08:13	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0059	1		08/02/17 08:13	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0059	1		08/02/17 08:13	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0059	1		08/02/17 08:13	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0059	1		08/02/17 08:13	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.12	1		08/02/17 08:13	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0059	1		08/02/17 08:13	87-68-3	
n-Hexane	ND	mg/kg	0.0059	1		08/02/17 08:13	110-54-3	
2-Hexanone	ND	mg/kg	0.12	1		08/02/17 08:13	591-78-6	
Iodomethane	ND	mg/kg	0.12	1		08/02/17 08:13	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 39 (0-2) Lab ID: 50176495003 Collected: 07/28/17 08:15 Received: 07/28/17 14:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0059	1		08/02/17 08:13	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0059	1		08/02/17 08:13	99-87-6	
Methylene Chloride	ND	mg/kg	0.024	1		08/02/17 08:13	75-09-2	
1-Methylnaphthalene	ND	mg/kg	0.012	1		08/02/17 08:13	90-12-0	N2
2-Methylnaphthalene	ND	mg/kg	0.012	1		08/02/17 08:13	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.030	1		08/02/17 08:13	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0059	1		08/02/17 08:13	1634-04-4	
Naphthalene	ND	mg/kg	0.0059	1		08/02/17 08:13	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	103-65-1	
Styrene	ND	mg/kg	0.0059	1		08/02/17 08:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0059	1		08/02/17 08:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0059	1		08/02/17 08:13	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0059	1		08/02/17 08:13	127-18-4	
Toluene	ND	mg/kg	0.0059	1		08/02/17 08:13	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0059	1		08/02/17 08:13	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0059	1		08/02/17 08:13	79-00-5	
Trichloroethene	ND	mg/kg	0.0059	1		08/02/17 08:13	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0059	1		08/02/17 08:13	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0059	1		08/02/17 08:13	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0059	1		08/02/17 08:13	108-67-8	
Vinyl acetate	ND	mg/kg	0.12	1		08/02/17 08:13	108-05-4	L2
Vinyl chloride	ND	mg/kg	0.0059	1		08/02/17 08:13	75-01-4	
Xylene (Total)	ND	mg/kg	0.012	1		08/02/17 08:13	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	109	%.	69-136	1		08/02/17 08:13	1868-53-7	
Toluene-d8 (S)	116	%.	64-150	1		08/02/17 08:13	2037-26-5	
4-Bromofluorobenzene (S)	85	%.	51-142	1		08/02/17 08:13	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	18.4	%	0.10	1		08/07/17 13:58		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 39 (3-5) Lab ID: 50176495004 Collected: 07/28/17 08:20 Received: 07/28/17 14:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	mg/kg	0.087	1		08/02/17 08:45	67-64-1	R1
Acrolein	ND	mg/kg	0.087	1		08/02/17 08:45	107-02-8	R1
Acrylonitrile	ND	mg/kg	0.087	1		08/02/17 08:45	107-13-1	R1
Benzene	ND	mg/kg	0.0044	1		08/02/17 08:45	71-43-2	R1
Bromobenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	108-86-1	R1
Bromoform	ND	mg/kg	0.0044	1		08/02/17 08:45	75-25-2	R1
Bromomethane	ND	mg/kg	0.0044	1		08/02/17 08:45	74-83-9	R1
2-Butanone (MEK)	ND	mg/kg	0.022	1		08/02/17 08:45	78-93-3	R1
n-Butylbenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	104-51-8	R1
sec-Butylbenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	135-98-8	R1
tert-Butylbenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	98-06-6	R1
Carbon disulfide	ND	mg/kg	0.0087	1		08/02/17 08:45	75-15-0	R1
Carbon tetrachloride	ND	mg/kg	0.0044	1		08/02/17 08:45	56-23-5	R1
Chlorobenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	108-90-7	R1
Chloroethane	ND	mg/kg	0.0044	1		08/02/17 08:45	75-00-3	R1
Chloroform	ND	mg/kg	0.0044	1		08/02/17 08:45	67-66-3	R1
Chloromethane	ND	mg/kg	0.0044	1		08/02/17 08:45	74-87-3	R1
2-Chlorotoluene	ND	mg/kg	0.0044	1		08/02/17 08:45	95-49-8	R1
4-Chlorotoluene	ND	mg/kg	0.0044	1		08/02/17 08:45	106-43-4	R1
Dibromochloromethane	ND	mg/kg	0.0044	1		08/02/17 08:45	124-48-1	R1
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0044	1		08/02/17 08:45	106-93-4	R1
Dibromomethane	ND	mg/kg	0.0044	1		08/02/17 08:45	74-95-3	R1
1,2-Dichlorobenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	95-50-1	R1
1,3-Dichlorobenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	541-73-1	R1
1,4-Dichlorobenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	106-46-7	R1
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.087	1		08/02/17 08:45	110-57-6	R1
Dichlorodifluoromethane	ND	mg/kg	0.0044	1		08/02/17 08:45	75-71-8	R1
1,1-Dichloroethane	ND	mg/kg	0.0044	1		08/02/17 08:45	75-34-3	R1
1,2-Dichloroethane	ND	mg/kg	0.0044	1		08/02/17 08:45	107-06-2	R1
1,1-Dichloroethene	ND	mg/kg	0.0044	1		08/02/17 08:45	75-35-4	R1
cis-1,2-Dichloroethene	ND	mg/kg	0.0044	1		08/02/17 08:45	156-59-2	R1
trans-1,2-Dichloroethene	ND	mg/kg	0.0044	1		08/02/17 08:45	156-60-5	R1
1,2-Dichloropropane	ND	mg/kg	0.0044	1		08/02/17 08:45	78-87-5	R1
1,3-Dichloropropane	ND	mg/kg	0.0044	1		08/02/17 08:45	142-28-9	R1
2,2-Dichloropropane	ND	mg/kg	0.0044	1		08/02/17 08:45	594-20-7	R1
1,1-Dichloropropene	ND	mg/kg	0.0044	1		08/02/17 08:45	563-58-6	R1
cis-1,3-Dichloropropene	ND	mg/kg	0.0044	1		08/02/17 08:45	10061-01-5	R1
trans-1,3-Dichloropropene	ND	mg/kg	0.0044	1		08/02/17 08:45	10061-02-6	R1
Ethylbenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	100-41-4	R1
Ethyl methacrylate	ND	mg/kg	0.087	1		08/02/17 08:45	97-63-2	R1
Hexachloro-1,3-butadiene	ND	mg/kg	0.0044	1		08/02/17 08:45	87-68-3	R1
n-Hexane	ND	mg/kg	0.0044	1		08/02/17 08:45	110-54-3	R1
2-Hexanone	ND	mg/kg	0.087	1		08/02/17 08:45	591-78-6	R1
Iodomethane	ND	mg/kg	0.087	1		08/02/17 08:45	74-88-4	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 39 (3-5) Lab ID: 50176495004 Collected: 07/28/17 08:20 Received: 07/28/17 14:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA	Analytical Method: EPA 8260							
Isopropylbenzene (Cumene)	ND	mg/kg	0.0044	1		08/02/17 08:45	98-82-8	R1
p-Isopropyltoluene	ND	mg/kg	0.0044	1		08/02/17 08:45	99-87-6	R1
Methylene Chloride	ND	mg/kg	0.017	1		08/02/17 08:45	75-09-2	R1
1-Methylnaphthalene	ND	mg/kg	0.0087	1		08/02/17 08:45	90-12-0	N2,R1
2-Methylnaphthalene	ND	mg/kg	0.0087	1		08/02/17 08:45	91-57-6	R1
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.022	1		08/02/17 08:45	108-10-1	R1
Methyl-tert-butyl ether	ND	mg/kg	0.0044	1		08/02/17 08:45	1634-04-4	R1
Naphthalene	ND	mg/kg	0.0044	1		08/02/17 08:45	91-20-3	R1
n-Propylbenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	103-65-1	R1
Styrene	ND	mg/kg	0.0044	1		08/02/17 08:45	100-42-5	R1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0044	1		08/02/17 08:45	630-20-6	R1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0044	1		08/02/17 08:45	79-34-5	R1
Tetrachloroethene	ND	mg/kg	0.0044	1		08/02/17 08:45	127-18-4	R1
Toluene	ND	mg/kg	0.0044	1		08/02/17 08:45	108-88-3	R1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	87-61-6	R1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	120-82-1	R1
1,1,1-Trichloroethane	ND	mg/kg	0.0044	1		08/02/17 08:45	71-55-6	R1
1,1,2-Trichloroethane	ND	mg/kg	0.0044	1		08/02/17 08:45	79-00-5	R1
Trichloroethene	ND	mg/kg	0.0044	1		08/02/17 08:45	79-01-6	R1
Trichlorofluoromethane	ND	mg/kg	0.0044	1		08/02/17 08:45	75-69-4	R1
1,2,3-Trichloropropane	ND	mg/kg	0.0044	1		08/02/17 08:45	96-18-4	R1
1,2,4-Trimethylbenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	95-63-6	R1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0044	1		08/02/17 08:45	108-67-8	R1
Vinyl acetate	ND	mg/kg	0.087	1		08/02/17 08:45	108-05-4	L2,M0
Vinyl chloride	ND	mg/kg	0.0044	1		08/02/17 08:45	75-01-4	
Xylene (Total)	ND	mg/kg	0.0087	1		08/02/17 08:45	1330-20-7	RS
Surrogates								
Dibromofluoromethane (S)	101	%.	69-136	1		08/02/17 08:45	1868-53-7	
Toluene-d8 (S)	106	%.	64-150	1		08/02/17 08:45	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	51-142	1		08/02/17 08:45	460-00-4	
Percent Moisture	Analytical Method: SM 2540G							
Percent Moisture	13.8	%	0.10	1		08/07/17 13:58		

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 41 (30-34) **Lab ID: 50176495005** Collected: 07/28/17 10:15 Received: 07/28/17 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		07/31/17 20:00	67-64-1	
Acrolein	ND	ug/L	50.0	1		07/31/17 20:00	107-02-8	
Acrylonitrile	ND	ug/L	100	1		07/31/17 20:00	107-13-1	
Benzene	ND	ug/L	5.0	1		07/31/17 20:00	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		07/31/17 20:00	108-86-1	
Bromoform	ND	ug/L	5.0	1		07/31/17 20:00	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		07/31/17 20:00	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		07/31/17 20:00	75-25-2	
Bromoform	ND	ug/L	5.0	1		07/31/17 20:00	74-83-9	
Bromomethane	ND	ug/L	25.0	1		07/31/17 20:00	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		07/31/17 20:00	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		07/31/17 20:00	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		07/31/17 20:00	98-06-6	
tert-Butylbenzene	ND	ug/L	10.0	1		07/31/17 20:00	75-15-0	
Carbon disulfide	ND	ug/L	5.0	1		07/31/17 20:00	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		07/31/17 20:00	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		07/31/17 20:00	75-00-3	
Chloroethane	ND	ug/L	5.0	1		07/31/17 20:00	67-66-3	
Chloroform	ND	ug/L	5.0	1		07/31/17 20:00	74-87-3	
Chloromethane	ND	ug/L	5.0	1		07/31/17 20:00	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		07/31/17 20:00	124-48-1	
4-Chlorotoluene	ND	ug/L	5.0	1		07/31/17 20:00	106-93-4	
Dibromochloromethane	ND	ug/L	5.0	1		07/31/17 20:00	106-46-7	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		07/31/17 20:00	110-57-6	
Dibromomethane	ND	ug/L	5.0	1		07/31/17 20:00	541-73-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:00	75-34-3	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:00	107-06-2	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:00	156-59-2	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		07/31/17 20:00	156-60-5	
Dichlorodifluoromethane	ND	ug/L	5.0	1		07/31/17 20:00	156-58-6	
1,1-Dichloroethane	ND	ug/L	5.0	1		07/31/17 20:00	100-41-4	
1,2-Dichloroethane	ND	ug/L	5.0	1		07/31/17 20:00	97-63-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		07/31/17 20:00	594-20-7	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		07/31/17 20:00	563-58-6	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		07/31/17 20:00	10061-01-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		07/31/17 20:00	142-28-9	
1,3-Dichloropropane	ND	ug/L	5.0	1		07/31/17 20:00	563-58-6	
2,2-Dichloropropane	ND	ug/L	5.0	1		07/31/17 20:00	106-88-4	
1,1-Dichloropropene	ND	ug/L	5.0	1		07/31/17 20:00	110-54-3	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		07/31/17 20:00	110-54-3	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		07/31/17 20:00	591-78-6	
Ethylbenzene	ND	ug/L	5.0	1		07/31/17 20:00	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		07/31/17 20:00	98-82-8	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		07/31/17 20:00	87-68-3	
n-Hexane	ND	ug/L	5.0	1		07/31/17 20:00	120-80-9	
2-Hexanone	ND	ug/L	25.0	1		07/31/17 20:00	591-78-6	
Iodomethane	ND	ug/L	10.0	1		07/31/17 20:00	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		07/31/17 20:00	98-82-8	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 41 (30-34) **Lab ID: 50176495005** Collected: 07/28/17 10:15 Received: 07/28/17 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
p-Isopropyltoluene	ND	ug/L	5.0	1		07/31/17 20:00	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		07/31/17 20:00	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		07/31/17 20:00	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		07/31/17 20:00	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		07/31/17 20:00	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		07/31/17 20:00	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		07/31/17 20:00	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		07/31/17 20:00	103-65-1	
Styrene	ND	ug/L	5.0	1		07/31/17 20:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		07/31/17 20:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		07/31/17 20:00	79-34-5	
Tetrachloroethene	18.4	ug/L	5.0	1		07/31/17 20:00	127-18-4	
Toluene	ND	ug/L	5.0	1		07/31/17 20:00	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:00	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:00	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		07/31/17 20:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		07/31/17 20:00	79-00-5	L2
Trichloroethene	21.1	ug/L	5.0	1		07/31/17 20:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		07/31/17 20:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		07/31/17 20:00	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		07/31/17 20:00	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		07/31/17 20:00	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		07/31/17 20:00	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		07/31/17 20:00	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		07/31/17 20:00	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	106	%.	86-116	1		07/31/17 20:00	1868-53-7	
4-Bromofluorobenzene (S)	103	%.	84-113	1		07/31/17 20:00	460-00-4	
Toluene-d8 (S)	96	%.	86-111	1		07/31/17 20:00	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 41 (24-28) **Lab ID: 50176495006** Collected: 07/28/17 10:20 Received: 07/28/17 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		07/31/17 20:32	67-64-1	
Acrolein	ND	ug/L	50.0	1		07/31/17 20:32	107-02-8	
Acrylonitrile	ND	ug/L	100	1		07/31/17 20:32	107-13-1	
Benzene	ND	ug/L	5.0	1		07/31/17 20:32	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		07/31/17 20:32	108-86-1	
Bromoform	ND	ug/L	5.0	1		07/31/17 20:32	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		07/31/17 20:32	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		07/31/17 20:32	75-25-2	
Bromoform	ND	ug/L	5.0	1		07/31/17 20:32	74-83-9	
Bromomethane	ND	ug/L	5.0	1		07/31/17 20:32	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		07/31/17 20:32	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		07/31/17 20:32	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		07/31/17 20:32	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		07/31/17 20:32	106-46-7	
Carbon disulfide	ND	ug/L	10.0	1		07/31/17 20:32	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		07/31/17 20:32	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		07/31/17 20:32	108-90-7	
Chloroethane	ND	ug/L	5.0	1		07/31/17 20:32	75-00-3	
Chloroform	ND	ug/L	5.0	1		07/31/17 20:32	67-66-3	
Chloromethane	ND	ug/L	5.0	1		07/31/17 20:32	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		07/31/17 20:32	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		07/31/17 20:32	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		07/31/17 20:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		07/31/17 20:32	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		07/31/17 20:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:32	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		07/31/17 20:32	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		07/31/17 20:32	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		07/31/17 20:32	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		07/31/17 20:32	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		07/31/17 20:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		07/31/17 20:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		07/31/17 20:32	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		07/31/17 20:32	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		07/31/17 20:32	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		07/31/17 20:32	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		07/31/17 20:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		07/31/17 20:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		07/31/17 20:32	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		07/31/17 20:32	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		07/31/17 20:32	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		07/31/17 20:32	87-68-3	
n-Hexane	ND	ug/L	5.0	1		07/31/17 20:32	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		07/31/17 20:32	591-78-6	
Iodomethane	ND	ug/L	10.0	1		07/31/17 20:32	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		07/31/17 20:32	98-82-8	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 41 (24-28) **Lab ID: 50176495006** Collected: 07/28/17 10:20 Received: 07/28/17 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
p-Isopropyltoluene	ND	ug/L	5.0	1		07/31/17 20:32	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		07/31/17 20:32	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		07/31/17 20:32	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		07/31/17 20:32	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		07/31/17 20:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		07/31/17 20:32	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		07/31/17 20:32	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		07/31/17 20:32	103-65-1	
Styrene	ND	ug/L	5.0	1		07/31/17 20:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		07/31/17 20:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		07/31/17 20:32	79-34-5	
Tetrachloroethene	18.4	ug/L	5.0	1		07/31/17 20:32	127-18-4	
Toluene	ND	ug/L	5.0	1		07/31/17 20:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		07/31/17 20:32	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		07/31/17 20:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		07/31/17 20:32	79-00-5	L2
Trichloroethene	53.4	ug/L	5.0	1		07/31/17 20:32	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		07/31/17 20:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		07/31/17 20:32	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		07/31/17 20:32	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		07/31/17 20:32	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		07/31/17 20:32	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		07/31/17 20:32	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		07/31/17 20:32	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%.	86-116	1		07/31/17 20:32	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	84-113	1		07/31/17 20:32	460-00-4	
Toluene-d8 (S)	94	%.	86-111	1		07/31/17 20:32	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 41 (15-20) **Lab ID: 50176495007** Collected: 07/28/17 10:25 Received: 07/28/17 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		07/31/17 21:04	67-64-1	
Acrolein	ND	ug/L	50.0	1		07/31/17 21:04	107-02-8	
Acrylonitrile	ND	ug/L	100	1		07/31/17 21:04	107-13-1	
Benzene	ND	ug/L	5.0	1		07/31/17 21:04	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		07/31/17 21:04	108-86-1	
Bromoform	ND	ug/L	5.0	1		07/31/17 21:04	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		07/31/17 21:04	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		07/31/17 21:04	75-25-2	
Bromoform	ND	ug/L	5.0	1		07/31/17 21:04	74-83-9	
Bromomethane	ND	ug/L	5.0	1		07/31/17 21:04	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		07/31/17 21:04	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		07/31/17 21:04	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		07/31/17 21:04	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		07/31/17 21:04	106-46-7	
Carbon disulfide	ND	ug/L	10.0	1		07/31/17 21:04	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		07/31/17 21:04	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		07/31/17 21:04	108-90-7	
Chloroethane	ND	ug/L	5.0	1		07/31/17 21:04	75-00-3	
Chloroform	ND	ug/L	5.0	1		07/31/17 21:04	67-66-3	
Chloromethane	ND	ug/L	5.0	1		07/31/17 21:04	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		07/31/17 21:04	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		07/31/17 21:04	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		07/31/17 21:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		07/31/17 21:04	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		07/31/17 21:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:04	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		07/31/17 21:04	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		07/31/17 21:04	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		07/31/17 21:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		07/31/17 21:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		07/31/17 21:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		07/31/17 21:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		07/31/17 21:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		07/31/17 21:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		07/31/17 21:04	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		07/31/17 21:04	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		07/31/17 21:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		07/31/17 21:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		07/31/17 21:04	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		07/31/17 21:04	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		07/31/17 21:04	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		07/31/17 21:04	87-68-3	
n-Hexane	ND	ug/L	5.0	1		07/31/17 21:04	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		07/31/17 21:04	591-78-6	
Iodomethane	ND	ug/L	10.0	1		07/31/17 21:04	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		07/31/17 21:04	98-82-8	

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ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: PB 41 (15-20) **Lab ID: 50176495007** Collected: 07/28/17 10:25 Received: 07/28/17 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		07/31/17 21:04	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		07/31/17 21:04	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		07/31/17 21:04	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		07/31/17 21:04	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		07/31/17 21:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		07/31/17 21:04	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		07/31/17 21:04	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		07/31/17 21:04	103-65-1	
Styrene	ND	ug/L	5.0	1		07/31/17 21:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		07/31/17 21:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		07/31/17 21:04	79-34-5	
Tetrachloroethene	22.5	ug/L	5.0	1		07/31/17 21:04	127-18-4	
Toluene	ND	ug/L	5.0	1		07/31/17 21:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		07/31/17 21:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		07/31/17 21:04	79-00-5	L2
Trichloroethene	64.5	ug/L	5.0	1		07/31/17 21:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		07/31/17 21:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		07/31/17 21:04	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		07/31/17 21:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		07/31/17 21:04	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		07/31/17 21:04	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		07/31/17 21:04	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		07/31/17 21:04	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%.	86-116	1		07/31/17 21:04	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	84-113	1		07/31/17 21:04	460-00-4	
Toluene-d8 (S)	97	%.	86-111	1		07/31/17 21:04	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

Sample: Trip Blank	Lab ID: 50176495008	Collected: 07/28/17 08:00	Received: 07/28/17 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
Acetone	ND	ug/L	100	1		07/31/17 21:36	67-64-1	
Acrolein	ND	ug/L	50.0	1		07/31/17 21:36	107-02-8	
Acrylonitrile	ND	ug/L	100	1		07/31/17 21:36	107-13-1	
Benzene	ND	ug/L	5.0	1		07/31/17 21:36	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		07/31/17 21:36	108-86-1	
Bromoform	ND	ug/L	5.0	1		07/31/17 21:36	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		07/31/17 21:36	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		07/31/17 21:36	75-25-2	
Bromoform	ND	ug/L	5.0	1		07/31/17 21:36	74-83-9	
Bromomethane	ND	ug/L	25.0	1		07/31/17 21:36	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		07/31/17 21:36	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		07/31/17 21:36	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		07/31/17 21:36	98-06-6	
tert-Butylbenzene	ND	ug/L	10.0	1		07/31/17 21:36	75-15-0	
Carbon disulfide	ND	ug/L	5.0	1		07/31/17 21:36	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		07/31/17 21:36	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		07/31/17 21:36	75-00-3	
Chloroethane	ND	ug/L	5.0	1		07/31/17 21:36	67-66-3	
Chloroform	ND	ug/L	5.0	1		07/31/17 21:36	74-87-3	
Chloromethane	ND	ug/L	5.0	1		07/31/17 21:36	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		07/31/17 21:36	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		07/31/17 21:36	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		07/31/17 21:36	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		07/31/17 21:36	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		07/31/17 21:36	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:36	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:36	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:36	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		07/31/17 21:36	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		07/31/17 21:36	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		07/31/17 21:36	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		07/31/17 21:36	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		07/31/17 21:36	156-58-6	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		07/31/17 21:36	10061-01-5	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		07/31/17 21:36	10061-02-6	
1,2-Dichloropropane	ND	ug/L	5.0	1		07/31/17 21:36	142-28-9	
1,3-Dichloropropane	ND	ug/L	5.0	1		07/31/17 21:36	594-20-7	
2,2-Dichloropropane	ND	ug/L	5.0	1		07/31/17 21:36	563-58-6	
1,1-Dichloropropene	ND	ug/L	5.0	1		07/31/17 21:36	10061-04-2	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		07/31/17 21:36	10061-05-3	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		07/31/17 21:36	10061-06-4	
Ethylbenzene	ND	ug/L	5.0	1		07/31/17 21:36	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		07/31/17 21:36	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		07/31/17 21:36	87-68-3	
n-Hexane	ND	ug/L	5.0	1		07/31/17 21:36	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		07/31/17 21:36	591-78-6	
Iodomethane	ND	ug/L	10.0	1		07/31/17 21:36	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		07/31/17 21:36	98-82-8	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

Sample: Trip Blank	Lab ID: 50176495008	Collected: 07/28/17 08:00	Received: 07/28/17 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
p-Isopropyltoluene	ND	ug/L	5.0	1		07/31/17 21:36	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		07/31/17 21:36	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		07/31/17 21:36	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		07/31/17 21:36	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		07/31/17 21:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		07/31/17 21:36	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		07/31/17 21:36	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		07/31/17 21:36	103-65-1	
Styrene	ND	ug/L	5.0	1		07/31/17 21:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		07/31/17 21:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		07/31/17 21:36	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		07/31/17 21:36	127-18-4	
Toluene	ND	ug/L	5.0	1		07/31/17 21:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		07/31/17 21:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		07/31/17 21:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		07/31/17 21:36	79-00-5	L2
Trichloroethene	ND	ug/L	5.0	1		07/31/17 21:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		07/31/17 21:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		07/31/17 21:36	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		07/31/17 21:36	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		07/31/17 21:36	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		07/31/17 21:36	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		07/31/17 21:36	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		07/31/17 21:36	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%.	86-116	1		07/31/17 21:36	1868-53-7	
4-Bromofluorobenzene (S)	104	%.	84-113	1		07/31/17 21:36	460-00-4	
Toluene-d8 (S)	100	%.	86-111	1		07/31/17 21:36	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176495

QC Batch:	399113	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	50176495005, 50176495006, 50176495007, 50176495008		

METHOD BLANK: 1837991 Matrix: Water

Associated Lab Samples: 50176495005, 50176495006, 50176495007, 50176495008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	07/31/17 12:34	
1,1,1-Trichloroethane	ug/L	ND	5.0	07/31/17 12:34	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	07/31/17 12:34	
1,1,2-Trichloroethane	ug/L	ND	5.0	07/31/17 12:34	
1,1-Dichloroethane	ug/L	ND	5.0	07/31/17 12:34	
1,1-Dichloroethene	ug/L	ND	5.0	07/31/17 12:34	
1,1-Dichloropropene	ug/L	ND	5.0	07/31/17 12:34	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	07/31/17 12:34	
1,2,3-Trichloropropane	ug/L	ND	5.0	07/31/17 12:34	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/31/17 12:34	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	07/31/17 12:34	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	07/31/17 12:34	
1,2-Dichlorobenzene	ug/L	ND	5.0	07/31/17 12:34	
1,2-Dichloroethane	ug/L	ND	5.0	07/31/17 12:34	
1,2-Dichloropropane	ug/L	ND	5.0	07/31/17 12:34	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	07/31/17 12:34	
1,3-Dichlorobenzene	ug/L	ND	5.0	07/31/17 12:34	
1,3-Dichloropropane	ug/L	ND	5.0	07/31/17 12:34	
1,4-Dichlorobenzene	ug/L	ND	5.0	07/31/17 12:34	
1-Methylnaphthalene	ug/L	ND	5.0	07/31/17 12:34	N2
2,2-Dichloropropane	ug/L	ND	5.0	07/31/17 12:34	
2-Butanone (MEK)	ug/L	ND	25.0	07/31/17 12:34	
2-Chlorotoluene	ug/L	ND	5.0	07/31/17 12:34	
2-Hexanone	ug/L	ND	25.0	07/31/17 12:34	
2-Methylnaphthalene	ug/L	ND	10.0	07/31/17 12:34	
4-Chlorotoluene	ug/L	ND	5.0	07/31/17 12:34	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	07/31/17 12:34	
Acetone	ug/L	ND	100	07/31/17 12:34	
Acrolein	ug/L	ND	50.0	07/31/17 12:34	
Acrylonitrile	ug/L	ND	100	07/31/17 12:34	
Benzene	ug/L	ND	5.0	07/31/17 12:34	
Bromobenzene	ug/L	ND	5.0	07/31/17 12:34	
Bromochloromethane	ug/L	ND	5.0	07/31/17 12:34	
Bromodichloromethane	ug/L	ND	5.0	07/31/17 12:34	
Bromoform	ug/L	ND	5.0	07/31/17 12:34	
Bromomethane	ug/L	ND	5.0	07/31/17 12:34	
Carbon disulfide	ug/L	ND	10.0	07/31/17 12:34	
Carbon tetrachloride	ug/L	ND	5.0	07/31/17 12:34	
Chlorobenzene	ug/L	ND	5.0	07/31/17 12:34	
Chloroethane	ug/L	ND	5.0	07/31/17 12:34	
Chloroform	ug/L	ND	5.0	07/31/17 12:34	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

METHOD BLANK: 1837991 Matrix: Water
 Associated Lab Samples: 50176495005, 50176495006, 50176495007, 50176495008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	ug/L	ND	5.0	07/31/17 12:34	
cis-1,2-Dichloroethene	ug/L	ND	5.0	07/31/17 12:34	
cis-1,3-Dichloropropene	ug/L	ND	5.0	07/31/17 12:34	
Dibromochloromethane	ug/L	ND	5.0	07/31/17 12:34	
Dibromomethane	ug/L	ND	5.0	07/31/17 12:34	
Dichlorodifluoromethane	ug/L	ND	5.0	07/31/17 12:34	
Ethyl methacrylate	ug/L	ND	100	07/31/17 12:34	
Ethylbenzene	ug/L	ND	5.0	07/31/17 12:34	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/31/17 12:34	
Iodomethane	ug/L	ND	10.0	07/31/17 12:34	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	07/31/17 12:34	
Methyl-tert-butyl ether	ug/L	ND	4.0	07/31/17 12:34	
Methylene Chloride	ug/L	ND	5.0	07/31/17 12:34	
n-Butylbenzene	ug/L	ND	5.0	07/31/17 12:34	
n-Hexane	ug/L	ND	5.0	07/31/17 12:34	
n-Propylbenzene	ug/L	ND	5.0	07/31/17 12:34	
Naphthalene	ug/L	ND	1.7	07/31/17 12:34	
p-Isopropyltoluene	ug/L	ND	5.0	07/31/17 12:34	
sec-Butylbenzene	ug/L	ND	5.0	07/31/17 12:34	
Styrene	ug/L	ND	5.0	07/31/17 12:34	
tert-Butylbenzene	ug/L	ND	5.0	07/31/17 12:34	
Tetrachloroethene	ug/L	ND	5.0	07/31/17 12:34	
Toluene	ug/L	ND	5.0	07/31/17 12:34	
trans-1,2-Dichloroethene	ug/L	ND	5.0	07/31/17 12:34	
trans-1,3-Dichloropropene	ug/L	ND	5.0	07/31/17 12:34	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	07/31/17 12:34	
Trichloroethene	ug/L	ND	5.0	07/31/17 12:34	
Trichlorofluoromethane	ug/L	ND	5.0	07/31/17 12:34	
Vinyl acetate	ug/L	ND	50.0	07/31/17 12:34	
Vinyl chloride	ug/L	ND	2.0	07/31/17 12:34	
Xylene (Total)	ug/L	ND	10.0	07/31/17 12:34	
4-Bromofluorobenzene (S)	%.	102	84-113	07/31/17 12:34	
Dibromofluoromethane (S)	%.	103	86-116	07/31/17 12:34	
Toluene-d8 (S)	%.	92	86-111	07/31/17 12:34	

LABORATORY CONTROL SAMPLE: 1837992

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	44.6	89	80-123	
1,1,1-Trichloroethane	ug/L	50	47.6	95	72-126	
1,1,2,2-Tetrachloroethane	ug/L	50	40.9	82	74-124	
1,1,2-Trichloroethane	ug/L	50	38.4	77	79-121 L2	
1,1-Dichloroethane	ug/L	50	45.2	90	77-122	
1,1-Dichloroethene	ug/L	50	47.4	95	70-131	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

LABORATORY CONTROL SAMPLE: 1837992

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloropropene	ug/L	50	50.1	100	79-124	
1,2,3-Trichlorobenzene	ug/L	50	44.5	89	70-129	
1,2,3-Trichloropropane	ug/L	50	43.9	88	79-128	
1,2,4-Trichlorobenzene	ug/L	50	44.7	89	69-129	
1,2,4-Trimethylbenzene	ug/L	50	46.3	93	76-125	
1,2-Dibromoethane (EDB)	ug/L	50	45.9	92	81-123	
1,2-Dichlorobenzene	ug/L	50	44.5	89	77-118	
1,2-Dichloroethane	ug/L	50	43.7	87	72-119	
1,2-Dichloropropane	ug/L	50	43.1	86	78-125	
1,3,5-Trimethylbenzene	ug/L	50	43.9	88	79-123	
1,3-Dichlorobenzene	ug/L	50	46.2	92	74-120	
1,3-Dichloropropane	ug/L	50	42.9	86	80-127	
1,4-Dichlorobenzene	ug/L	50	45.6	91	72-118	
1-Methylnaphthalene	ug/L	50	45.9	92	64-134 N2	
2,2-Dichloropropane	ug/L	50	46.9	94	41-145	
2-Butanone (MEK)	ug/L	250	268	107	61-150	
2-Chlorotoluene	ug/L	50	43.7	87	77-119	
2-Hexanone	ug/L	250	193	77	67-141	
2-Methylnaphthalene	ug/L	50	43.9	88	53-112	
4-Chlorotoluene	ug/L	50	44.8	90	75-123	
4-Methyl-2-pentanone (MIBK)	ug/L	250	185	74	71-131	
Acetone	ug/L	250	306	123	39-166	
Acrolein	ug/L	1000	1130	113	22-200	
Acrylonitrile	ug/L	200	173	87	62-130	
Benzene	ug/L	50	47.2	94	79-120	
Bromobenzene	ug/L	50	44.0	88	76-121	
Bromochloromethane	ug/L	50	45.2	90	69-136	
Bromodichloromethane	ug/L	50	45.0	90	76-125	
Bromoform	ug/L	50	37.7	75	69-119	
Bromomethane	ug/L	50	61.1	122	27-161	
Carbon disulfide	ug/L	50	45.7	91	60-130	
Carbon tetrachloride	ug/L	50	47.9	96	74-132	
Chlorobenzene	ug/L	50	44.4	89	77-116	
Chloroethane	ug/L	50	55.4	111	51-132	
Chloroform	ug/L	50	45.1	90	76-118	
Chloromethane	ug/L	50	43.7	87	46-126	
cis-1,2-Dichloroethene	ug/L	50	46.1	92	74-126	
cis-1,3-Dichloropropene	ug/L	50	42.5	85	78-125	
Dibromochloromethane	ug/L	50	45.2	90	80-123	
Dibromomethane	ug/L	50	42.2	84	75-124	
Dichlorodifluoromethane	ug/L	50	61.7	123	42-152	
Ethyl methacrylate	ug/L	200	161	80	75-136	
Ethylbenzene	ug/L	50	41.9	84	80-123	
Hexachloro-1,3-butadiene	ug/L	50	47.5	95	74-127	
Iodomethane	ug/L	100	94.2	94	43-156	
Isopropylbenzene (Cumene)	ug/L	50	46.4	93	80-122	
Methyl-tert-butyl ether	ug/L	50	45.1	90	63-131	

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

LABORATORY CONTROL SAMPLE: 1837992

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	ug/L	50	44.3	89	62-126	
n-Butylbenzene	ug/L	50	48.3	97	75-123	
n-Hexane	ug/L	50	43.9	88	66-129	
n-Propylbenzene	ug/L	50	46.9	94	79-128	
Naphthalene	ug/L	50	43.2	86	66-130	
p-Isopropyltoluene	ug/L	50	47.2	94	79-124	
sec-Butylbenzene	ug/L	50	48.7	97	80-126	
Styrene	ug/L	50	41.0	82	81-125	
tert-Butylbenzene	ug/L	50	37.6	75	62-106	
Tetrachloroethene	ug/L	50	40.3	81	74-119	
Toluene	ug/L	50	42.0	84	77-117	
trans-1,2-Dichloroethene	ug/L	50	45.1	90	74-128	
trans-1,3-Dichloropropene	ug/L	50	41.7	83	75-132	
trans-1,4-Dichloro-2-butene	ug/L	200	143	72	42-134	
Trichloroethene	ug/L	50	43.0	86	75-119	
Trichlorofluoromethane	ug/L	50	69.6	139	57-152	
Vinyl acetate	ug/L	200	185	92	71-148	
Vinyl chloride	ug/L	50	58.3	117	62-137	
Xylene (Total)	ug/L	150	130	87	79-121	
4-Bromofluorobenzene (S)	%			103	84-113	
Dibromofluoromethane (S)	%			99	86-116	
Toluene-d8 (S)	%			92	86-111	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1837993 1837994

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max		
		50176495006	Result	Spike Conc.	Spike Conc.				RPD	RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	44.6	43.2	89	86	48-143	3	20
1,1,1-Trichloroethane	ug/L	ND	50	50	45.3	43.5	91	87	52-142	4	20
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	40.6	41.1	81	82	48-143	1	20
1,1,2-Trichloroethane	ug/L	ND	50	50	39.8	40.4	80	81	51-139	2	20
1,1-Dichloroethane	ug/L	ND	50	50	43.3	41.3	87	83	53-139	5	20
1,1-Dichloroethene	ug/L	ND	50	50	47.1	47.3	94	95	50-149	0	20
1,1-Dichloropropene	ug/L	ND	50	50	45.6	43.6	91	87	52-145	5	20
1,2,3-Trichlorobenzene	ug/L	ND	50	50	42.5	40.3	85	81	30-144	5	20
1,2,3-Trichloropropane	ug/L	ND	50	50	45.9	44.7	92	89	49-149	3	20
1,2,4-Trichlorobenzene	ug/L	ND	50	50	41.8	39.5	84	79	24-146	6	20
1,2,4-Trimethylbenzene	ug/L	ND	50	50	45.5	44.1	91	88	33-150	3	20
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	44.3	44.0	89	88	54-141	1	20
1,2-Dichlorobenzene	ug/L	ND	50	50	42.7	42.2	85	84	33-142	1	20
1,2-Dichloroethane	ug/L	ND	50	50	43.6	41.1	87	82	47-138	6	20
1,2-Dichloropropane	ug/L	ND	50	50	41.0	38.8	82	78	55-142	6	20
1,3,5-Trimethylbenzene	ug/L	ND	50	50	45.3	43.0	91	86	31-150	5	20
1,3-Dichlorobenzene	ug/L	ND	50	50	44.8	41.8	90	84	27-145	7	20
1,3-Dichloropropane	ug/L	ND	50	50	44.3	43.5	89	87	55-145	2	20

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

Parameter	Units	50176495006		1837993		1837994		% Rec	Limits	RPD	Max RPD	Qual
		MS Result	Spike Conc.	MS Spike Conc.	MS Result	MSD Result	% Rec					
1,4-Dichlorobenzene	ug/L	ND	50	50	43.0	40.3	86	81	27-140	6	20	
1-Methylnaphthalene	ug/L	ND	50	50	45.0	42.7	90	85	40-143	5	20	N2
2,2-Dichloropropane	ug/L	ND	50	50	42.7	40.1	85	80	23-144	6	20	
2-Butanone (MEK)	ug/L	ND	250	250	233	220	93	88	39-159	6	20	
2-Chlorotoluene	ug/L	ND	50	50	45.8	43.6	92	87	31-148	5	20	
2-Hexanone	ug/L	ND	250	250	183	184	73	74	47-151	1	20	
2-Methylnaphthalene	ug/L	ND	50	50	40.7	39.1	81	78	27-123	4	20	
4-Chlorotoluene	ug/L	ND	50	50	44.9	43.4	90	87	30-148	3	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	190	188	76	75	48-146	1	20	
Acetone	ug/L	ND	250	250	222	230	89	92	31-152	3	20	
Acrolein	ug/L	ND	1000	1000	1170	1110	117	111	23-200	5	20	
Acrylonitrile	ug/L	ND	200	200	173	165	86	83	42-143	4	20	
Benzene	ug/L	ND	50	50	45.5	43.6	91	87	57-136	4	20	
Bromobenzene	ug/L	ND	50	50	43.7	44.0	87	88	45-138	1	20	
Bromoform	ug/L	ND	50	50	44.3	40.9	89	82	50-145	8	20	
Bromochloromethane	ug/L	ND	50	50	42.8	41.3	86	83	49-142	3	20	
Bromodichloromethane	ug/L	ND	50	50	36.4	35.5	73	71	39-131	3	20	
Bromoform	ug/L	ND	50	50	61.3	56.4	123	113	10-162	8	20	
Bromomethane	ug/L	ND	50	50	41.5	39.0	83	78	34-142	6	20	
Carbon disulfide	ug/L	ND	50	50	44.9	43.2	90	86	47-150	4	20	
Carbon tetrachloride	ug/L	ND	50	50	44.4	42.6	89	85	42-138	4	20	
Chlorobenzene	ug/L	ND	50	50	44.4	42.6	109	99	34-148	9	20	
Chloroethane	ug/L	ND	50	50	54.6	49.7	89	84	54-136	5	20	
Chloroform	ug/L	ND	50	50	44.4	42.1	89	84	27-138	11	20	
Chloromethane	ug/L	ND	50	50	41.0	36.5	82	73	48-147	5	20	
cis-1,2-Dichloroethene	ug/L	ND	50	50	45.1	42.8	90	86	40-142	1	20	
cis-1,3-Dichloropropene	ug/L	ND	50	50	41.0	40.4	82	81	46-143	1	20	
Dibromochloromethane	ug/L	ND	50	50	44.4	44.6	89	89	53-140	5	20	
Dibromomethane	ug/L	ND	50	50	44.3	42.0	89	84	23-169	6	20	
Dichlorodifluoromethane	ug/L	ND	50	50	56.4	52.8	113	106	50-136	5	20	
Ethyl methacrylate	ug/L	ND	200	200	163	159	81	80	54-149	2	20	
Ethylbenzene	ug/L	ND	50	50	40.9	39.7	81	79	40-147	3	20	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	45.6	42.2	91	84	19-156	8	20	
Iodomethane	ug/L	ND	100	100	92.0	87.2	92	87	13-136	5	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	45.2	45.1	90	90	37-151	0	20	
Methyl-tert-butyl ether	ug/L	ND	50	50	45.3	42.8	91	86	46-147	6	20	
Methylene Chloride	ug/L	ND	50	50	40.9	38.7	82	77	40-138	5	20	
n-Butylbenzene	ug/L	ND	50	50	45.5	42.3	91	85	21-155	7	20	
n-Hexane	ug/L	ND	50	50	42.3	39.4	85	79	50-137	7	20	
n-Propylbenzene	ug/L	ND	50	50	47.5	45.6	95	91	29-158	4	20	
Naphthalene	ug/L	ND	50	50	41.7	41.1	83	82	43-139	1	20	
p-Isopropyltoluene	ug/L	ND	50	50	45.7	42.8	91	86	25-156	6	20	
sec-Butylbenzene	ug/L	ND	50	50	46.7	44.3	93	89	27-159	5	20	
Styrene	ug/L	ND	50	50	40.1	40.4	79	80	34-149	1	20	
tert-Butylbenzene	ug/L	ND	50	50	37.9	35.8	76	72	25-128	6	20	
Tetrachloroethene	ug/L	18.4	50	50	57.0	55.3	77	74	37-144	3	20	

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REPORT OF LABORATORY ANALYSIS

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 7726 Moller Road
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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

Parameter	Units	50176495006		MS		MSD		% Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result							
Toluene	ug/L	ND	50	50	42.0	41.2	83	81	46-137	2	20		
trans-1,2-Dichloroethene	ug/L	ND	50	50	42.9	40.9	86	82	51-145	5	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	40.8	40.4	82	81	41-143	1	20		
trans-1,4-Dichloro-2-butene	ug/L	ND	200	200	129	127	64	64	10-145	1	20		
Trichloroethene	ug/L	53.4	50	50	84.4	81.0	62	55	45-139	4	20		
Trichlorofluoromethane	ug/L	ND	50	50	66.4	61.1	133	122	42-164	8	20		
Vinyl acetate	ug/L	ND	200	200	168	158	84	79	10-149	6	20		
Vinyl chloride	ug/L	ND	50	50	56.2	49.9	112	100	43-154	12	20		
Xylene (Total)	ug/L	ND	150	150	127	125	84	83	37-146	2	20		
4-Bromofluorobenzene (S)	%						104	103	84-113				
Dibromofluoromethane (S)	%							97	95	86-116			
Toluene-d8 (S)	%							94	95	86-111			

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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176495

QC Batch:	399334	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	50176495001, 50176495002, 50176495003, 50176495004		

METHOD BLANK: 1838946 Matrix: Solid

Associated Lab Samples: 50176495001, 50176495002, 50176495003, 50176495004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	08/02/17 02:22	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	08/02/17 02:22	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	08/02/17 02:22	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	08/02/17 02:22	
1,1-Dichloroethane	mg/kg	ND	0.0050	08/02/17 02:22	
1,1-Dichloroethene	mg/kg	ND	0.0050	08/02/17 02:22	
1,1-Dichloropropene	mg/kg	ND	0.0050	08/02/17 02:22	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	08/02/17 02:22	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	08/02/17 02:22	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	08/02/17 02:22	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	08/02/17 02:22	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	08/02/17 02:22	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	08/02/17 02:22	
1,2-Dichloroethane	mg/kg	ND	0.0050	08/02/17 02:22	
1,2-Dichloropropane	mg/kg	ND	0.0050	08/02/17 02:22	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	08/02/17 02:22	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	08/02/17 02:22	
1,3-Dichloropropane	mg/kg	ND	0.0050	08/02/17 02:22	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	08/02/17 02:22	
1-Methylnaphthalene	mg/kg	ND	0.010	08/02/17 02:22	N2
2,2-Dichloropropane	mg/kg	ND	0.0050	08/02/17 02:22	
2-Butanone (MEK)	mg/kg	ND	0.025	08/02/17 02:22	
2-Chlorotoluene	mg/kg	ND	0.0050	08/02/17 02:22	
2-Hexanone	mg/kg	ND	0.10	08/02/17 02:22	
2-Methylnaphthalene	mg/kg	ND	0.010	08/02/17 02:22	
4-Chlorotoluene	mg/kg	ND	0.0050	08/02/17 02:22	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	08/02/17 02:22	
Acetone	mg/kg	ND	0.10	08/02/17 02:22	
Acrolein	mg/kg	ND	0.10	08/02/17 02:22	
Acrylonitrile	mg/kg	ND	0.10	08/02/17 02:22	
Benzene	mg/kg	ND	0.0050	08/02/17 02:22	
Bromobenzene	mg/kg	ND	0.0050	08/02/17 02:22	
Bromochloromethane	mg/kg	ND	0.0050	08/02/17 02:22	
Bromodichloromethane	mg/kg	ND	0.0050	08/02/17 02:22	
Bromoform	mg/kg	ND	0.0050	08/02/17 02:22	
Bromomethane	mg/kg	ND	0.0050	08/02/17 02:22	
Carbon disulfide	mg/kg	ND	0.010	08/02/17 02:22	
Carbon tetrachloride	mg/kg	ND	0.0050	08/02/17 02:22	
Chlorobenzene	mg/kg	ND	0.0050	08/02/17 02:22	
Chloroethane	mg/kg	ND	0.0050	08/02/17 02:22	
Chloroform	mg/kg	ND	0.0050	08/02/17 02:22	

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 7726 Moller Road
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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

METHOD BLANK: 1838946 Matrix: Solid
 Associated Lab Samples: 50176495001, 50176495002, 50176495003, 50176495004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	mg/kg	ND	0.0050	08/02/17 02:22	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	08/02/17 02:22	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	08/02/17 02:22	
Dibromochloromethane	mg/kg	ND	0.0050	08/02/17 02:22	
Dibromomethane	mg/kg	ND	0.0050	08/02/17 02:22	
Dichlorodifluoromethane	mg/kg	ND	0.0050	08/02/17 02:22	
Ethyl methacrylate	mg/kg	ND	0.10	08/02/17 02:22	
Ethylbenzene	mg/kg	ND	0.0050	08/02/17 02:22	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	08/02/17 02:22	
Iodomethane	mg/kg	ND	0.10	08/02/17 02:22	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	08/02/17 02:22	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	08/02/17 02:22	
Methylene Chloride	mg/kg	ND	0.020	08/02/17 02:22	
n-Butylbenzene	mg/kg	ND	0.0050	08/02/17 02:22	
n-Hexane	mg/kg	ND	0.0050	08/02/17 02:22	
n-Propylbenzene	mg/kg	ND	0.0050	08/02/17 02:22	
Naphthalene	mg/kg	ND	0.0050	08/02/17 02:22	
p-Isopropyltoluene	mg/kg	ND	0.0050	08/02/17 02:22	
sec-Butylbenzene	mg/kg	ND	0.0050	08/02/17 02:22	
Styrene	mg/kg	ND	0.0050	08/02/17 02:22	
tert-Butylbenzene	mg/kg	ND	0.0050	08/02/17 02:22	
Tetrachloroethene	mg/kg	ND	0.0050	08/02/17 02:22	
Toluene	mg/kg	ND	0.0050	08/02/17 02:22	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	08/02/17 02:22	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	08/02/17 02:22	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	08/02/17 02:22	
Trichloroethene	mg/kg	ND	0.0050	08/02/17 02:22	
Trichlorofluoromethane	mg/kg	ND	0.0050	08/02/17 02:22	
Vinyl acetate	mg/kg	ND	0.10	08/02/17 02:22	
Vinyl chloride	mg/kg	ND	0.0050	08/02/17 02:22	
Xylene (Total)	mg/kg	ND	0.010	08/02/17 02:22	
4-Bromofluorobenzene (S)	%.	98	51-142	08/02/17 02:22	
Dibromofluoromethane (S)	%.	99	69-136	08/02/17 02:22	
Toluene-d8 (S)	%.	101	64-150	08/02/17 02:22	

LABORATORY CONTROL SAMPLE: 1838947

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	.05	0.048	96	76-126	
1,1,1-Trichloroethane	mg/kg	.05	0.050	99	72-126	
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.043	85	68-125	
1,1,2-Trichloroethane	mg/kg	.05	0.050	99	72-124	
1,1-Dichloroethane	mg/kg	.05	0.043	87	78-117	
1,1-Dichloroethene	mg/kg	.05	0.045	90	70-132	

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REPORT OF LABORATORY ANALYSIS



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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

LABORATORY CONTROL SAMPLE: 1838947

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloropropene	mg/kg	.05	0.047	94	79-121	
1,2,3-Trichlorobenzene	mg/kg	.05	0.045	90	65-117	
1,2,3-Trichloropropane	mg/kg	.05	0.053	106	78-128	
1,2,4-Trichlorobenzene	mg/kg	.05	0.041	82	58-121	
1,2,4-Trimethylbenzene	mg/kg	.05	0.044	88	70-118	
1,2-Dibromoethane (EDB)	mg/kg	.05	0.050	99	76-127	
1,2-Dichlorobenzene	mg/kg	.05	0.044	88	72-114	
1,2-Dichloroethane	mg/kg	.05	0.048	96	70-119	
1,2-Dichloropropane	mg/kg	.05	0.043	86	76-122	
1,3,5-Trimethylbenzene	mg/kg	.05	0.044	87	71-122	
1,3-Dichlorobenzene	mg/kg	.05	0.045	90	70-115	
1,3-Dichloropropane	mg/kg	.05	0.053	106	76-130	
1,4-Dichlorobenzene	mg/kg	.05	0.043	86	68-113	
1-Methylnaphthalene	mg/kg	.05	0.052	105	66-129 N2	
2,2-Dichloropropane	mg/kg	.05	0.040	80	66-125	
2-Butanone (MEK)	mg/kg	.25	0.25	101	56-161	
2-Chlorotoluene	mg/kg	.05	0.046	92	69-122	
2-Hexanone	mg/kg	.25	0.24	96	67-141	
2-Methylnaphthalene	mg/kg	.05	0.054	108	59-115	
4-Chlorotoluene	mg/kg	.05	0.045	89	70-118	
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.22	89	72-125	
Acetone	mg/kg	.25	0.25	102	24-194	
Acrolein	mg/kg	1	0.95	95	23-200	
Acrylonitrile	mg/kg	.2	0.19	94	70-122	
Benzene	mg/kg	.05	0.047	94	75-119	
Bromobenzene	mg/kg	.05	0.047	93	73-119	
Bromochloromethane	mg/kg	.05	0.044	88	73-117	
Bromodichloromethane	mg/kg	.05	0.045	89	73-120	
Bromoform	mg/kg	.05	0.038	75	65-121	
Bromomethane	mg/kg	.05	0.056	113	28-161	
Carbon disulfide	mg/kg	.05	0.044	88	64-115	
Carbon tetrachloride	mg/kg	.05	0.048	95	74-130	
Chlorobenzene	mg/kg	.05	0.048	96	75-114	
Chloroethane	mg/kg	.05	0.061	122	46-129	
Chloroform	mg/kg	.05	0.042	84	71-114	
Chloromethane	mg/kg	.05	0.050	100	39-121	
cis-1,2-Dichloroethene	mg/kg	.05	0.043	86	79-121	
cis-1,3-Dichloropropene	mg/kg	.05	0.046	93	73-132	
Dibromochloromethane	mg/kg	.05	0.046	93	73-123	
Dibromomethane	mg/kg	.05	0.046	93	79-119	
Dichlorodifluoromethane	mg/kg	.05	0.065	131	44-155	
Ethyl methacrylate	mg/kg	.2	0.20	100	74-136	
Ethylbenzene	mg/kg	.05	0.043	85	73-121	
Hexachloro-1,3-butadiene	mg/kg	.05	0.042	85	65-131	
Iodomethane	mg/kg	.1	.096J	96	44-168	
Isopropylbenzene (Cumene)	mg/kg	.05	0.051	102	72-122	
Methyl-tert-butyl ether	mg/kg	.05	0.048	97	74-121	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

LABORATORY CONTROL SAMPLE: 1838947

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methylene Chloride	mg/kg	.05	0.041	82	61-140	
n-Butylbenzene	mg/kg	.05	0.045	90	64-125	
n-Hexane	mg/kg	.05	0.042	83	69-116	
n-Propylbenzene	mg/kg	.05	0.048	95	70-127	
Naphthalene	mg/kg	.05	0.043	86	65-122	
p-Isopropyltoluene	mg/kg	.05	0.044	89	71-123	
sec-Butylbenzene	mg/kg	.05	0.049	98	72-129	
Styrene	mg/kg	.05	0.046	92	72-127	
tert-Butylbenzene	mg/kg	.05	0.040	80	57-108	
Tetrachloroethene	mg/kg	.05	0.045	91	68-120	
Toluene	mg/kg	.05	0.048	96	71-114	
trans-1,2-Dichloroethene	mg/kg	.05	0.045	90	76-125	
trans-1,3-Dichloropropene	mg/kg	.05	0.048	95	69-133	
trans-1,4-Dichloro-2-butene	mg/kg	.2	0.16	82	58-132	
Trichloroethene	mg/kg	.05	0.048	95	77-115	
Trichlorofluoromethane	mg/kg	.05	0.068	136	61-142	
Vinyl acetate	mg/kg	.2	0.12	61	64-139 L2	
Vinyl chloride	mg/kg	.05	0.058	116	66-139	
Xylene (Total)	mg/kg	.15	0.14	92	71-119	
4-Bromofluorobenzene (S)	%			104	51-142	
Dibromofluoromethane (S)	%			100	69-136	
Toluene-d8 (S)	%			106	64-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1838948 1838949

Parameter	Units	50176495004		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max	
		Result	Conc.	Spike	Spike	MS	MSD				RPD	RPD
1,1,1,2-Tetrachloroethane	mg/kg	ND	.05	.045	0.046	0.034	93	76	27-152	30	20	R1
1,1,1-Trichloroethane	mg/kg	ND	.05	.045	0.051	0.038	102	84	31-146	29	20	R1
1,1,2,2-Tetrachloroethane	mg/kg	ND	.05	.045	0.046	0.031	93	69	22-171	38	20	R1
1,1,2-Trichloroethane	mg/kg	ND	.05	.045	0.050	0.034	101	74	33-156	40	20	R1
1,1-Dichloroethane	mg/kg	ND	.05	.045	0.044	0.034	89	76	54-142	25	20	R1
1,1-Dichloroethene	mg/kg	ND	.05	.045	0.047	0.037	94	82	53-154	23	20	R1
1,1-Dichloropropene	mg/kg	ND	.05	.045	0.050	0.037	101	83	40-146	29	20	R1
1,2,3-Trichlorobenzene	mg/kg	ND	.05	.045	0.035	0.022	70	47	10-124	47	20	R1
1,2,3-Trichloropropane	mg/kg	ND	.05	.045	0.055	0.034	110	76	39-177	46	20	R1
1,2,4-Trichlorobenzene	mg/kg	ND	.05	.045	0.033	0.021	66	47	10-126	43	20	R1
1,2,4-Trimethylbenzene	mg/kg	ND	.05	.045	0.044	0.033	88	72	10-162	29	20	R1
1,2-Dibromoethane (EDB)	mg/kg	ND	.05	.045	0.049	0.035	99	77	28-155	34	20	R1
1,2-Dichlorobenzene	mg/kg	ND	.05	.045	0.043	0.031	87	68	10-142	32	20	R1
1,2-Dichloroethane	mg/kg	ND	.05	.045	0.046	0.033	92	73	45-133	32	20	R1
1,2-Dichloropropane	mg/kg	ND	.05	.045	0.043	0.030	87	67	49-140	35	20	R1
1,3,5-Trimethylbenzene	mg/kg	ND	.05	.045	0.045	0.034	90	74	10-151	29	20	R1
1,3-Dichlorobenzene	mg/kg	ND	.05	.045	0.043	0.030	87	67	10-138	35	20	R1
1,3-Dichloropropane	mg/kg	ND	.05	.045	0.053	0.034	106	75	37-158	43	20	R1

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

Parameter	Units	50176495004		1838948		1838949		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	MS Spike Conc.	Result	MSD Result							
1,4-Dichlorobenzene	mg/kg	ND	.05	.045	0.041	0.030	83	67	10-137	31	20	R1	
1-Methylnaphthalene	mg/kg	ND	.05	.045	0.036	0.023	73	51	10-126	44	20	N2,R1	
2,2-Dichloropropane	mg/kg	ND	.05	.045	0.043	0.032	86	70	43-146	29	20	R1	
2-Butanone (MEK)	mg/kg	ND	.24	.23	0.23	0.15	94	68	25-197	40	20	R1	
2-Chlorotoluene	mg/kg	ND	.05	.045	0.047	0.034	94	75	10-171	31	20	R1	
2-Hexanone	mg/kg	ND	.24	.23	0.20	0.13	81	56	21-184	46	20	R1	
2-Methylnaphthalene	mg/kg	ND	.05	.045	0.035	0.020	70	45	10-112	52	20	R1	
4-Chlorotoluene	mg/kg	ND	.05	.045	0.044	0.035	88	77	10-152	23	20	R1	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	.24	.23	0.22	0.14	87	63	31-169	40	20	R1	
Acetone	mg/kg	ND	.24	.23	0.25	0.19	97	78	22-200	29	20	R1	
Acrolein	mg/kg	ND	1	.9	0.48	0.29	48	31	10-200	51	20	R1	
Acrylonitrile	mg/kg	ND	.2	.19	0.16	0.10	81	57	20-165	44	20	R1	
Benzene	mg/kg	ND	.05	.045	0.046	0.034	94	76	43-141	30	20	R1	
Bromobenzene	mg/kg	ND	.05	.045	0.042	0.030	85	65	10-143	35	20	R1	
Bromochloromethane	mg/kg	ND	.05	.045	0.044	0.032	89	71	52-135	32	20	R1	
Bromodichloromethane	mg/kg	ND	.05	.045	0.045	0.031	91	69	27-145	36	20	R1	
Bromoform	mg/kg	ND	.05	.045	0.040	0.028	80	62	19-154	34	20	R1	
Bromomethane	mg/kg	ND	.05	.045	0.055	0.044	110	97	14-170	22	20	R1	
Carbon disulfide	mg/kg	ND	.05	.045	0.045	0.035	91	77	28-137	25	20	R1	
Carbon tetrachloride	mg/kg	ND	.05	.045	0.050	0.037	100	82	41-150	28	20	R1	
Chlorobenzene	mg/kg	ND	.05	.045	0.047	0.034	94	76	20-141	30	20	R1	
Chloroethane	mg/kg	ND	.05	.045	0.063	0.048	127	105	34-147	27	20	R1	
Chloroform	mg/kg	ND	.05	.045	0.042	0.031	85	69	49-134	29	20	R1	
Chloromethane	mg/kg	ND	.05	.045	0.051	0.041	102	90	27-136	22	20	R1	
cis-1,2-Dichloroethene	mg/kg	ND	.05	.045	0.043	0.033	87	72	50-144	28	20	R1	
cis-1,3-Dichloropropene	mg/kg	ND	.05	.045	0.046	0.033	92	74	22-161	31	20	R1	
Dibromochloromethane	mg/kg	ND	.05	.045	0.048	0.032	98	70	25-146	42	20	R1	
Dibromomethane	mg/kg	ND	.05	.045	0.043	0.030	86	66	39-142	35	20	R1	
Dichlorodifluoromethane	mg/kg	ND	.05	.045	0.071	0.053	143	116	20-186	29	20	R1	
Ethyl methacrylate	mg/kg	ND	.2	.19	.064J	ND	32	11	10-170	20			
Ethylbenzene	mg/kg	ND	.05	.045	0.043	0.032	86	70	21-149	30	20	R1	
Hexachloro-1,3-butadiene	mg/kg	ND	.05	.045	0.037	0.025	74	56	10-152	37	20	R1	
Iodomethane	mg/kg	ND	.1	.09	.091J	.068J	91	75	10-189	20			
Isopropylbenzene (Cumene)	mg/kg	ND	.05	.045	0.048	0.035	96	77	15-152	31	20	R1	
Methyl-tert-butyl ether	mg/kg	ND	.05	.045	0.048	0.034	96	75	60-141	34	20	R1	
Methylene Chloride	mg/kg	ND	.05	.045	0.041	0.031	77	63	41-145	28	20	R1	
n-Butylbenzene	mg/kg	ND	.05	.045	0.043	0.031	86	67	10-154	34	20	R1	
n-Hexane	mg/kg	ND	.05	.045	0.043	0.031	86	68	23-146	33	20	R1	
n-Propylbenzene	mg/kg	ND	.05	.045	0.050	0.037	100	81	10-183	30	20	R1	
Naphthalene	mg/kg	ND	.05	.045	0.035	0.023	71	51	10-134	41	20	R1	
p-Isopropyltoluene	mg/kg	ND	.05	.045	0.044	0.033	90	72	10-183	30	20	R1	
sec-Butylbenzene	mg/kg	ND	.05	.045	0.050	0.036	100	80	10-184	31	20	R1	
Styrene	mg/kg	ND	.05	.045	0.041	0.029	83	64	10-154	35	20	R1	
tert-Butylbenzene	mg/kg	ND	.05	.045	0.040	0.030	81	67	10-173	29	20	R1	
Tetrachloroethene	mg/kg	ND	.05	.045	0.050	0.035	97	75	21-155	34	20	R1	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

Parameter	Units	50176495004		1838948		1838949		% Rec	Limits	RPD	RPD	Max Qual
		MS Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Toluene	mg/kg	ND	.05	.045	0.049	0.036	98	78	30-146	31	20	R1
trans-1,2-Dichloroethene	mg/kg	ND	.05	.045	0.045	0.035	91	77	50-146	26	20	R1
trans-1,3-Dichloropropene	mg/kg	ND	.05	.045	0.047	0.030	94	67	15-157	42	20	R1
trans-1,4-Dichloro-2-butene	mg/kg	ND	.2	.19	0.15	0.093	73	51	10-155	44	20	R1
Trichloroethene	mg/kg	ND	.05	.045	0.044	0.034	89	76	25-162	25	20	R1
Trichlorofluoromethane	mg/kg	ND	.05	.045	0.072	0.056	146	124	42-164	25	20	R1
Vinyl acetate	mg/kg	ND	.2	.19	ND	ND	1	0	10-173		20	M0
Vinyl chloride	mg/kg	ND	.05	.045	0.060	0.050	122	111	51-160	18	20	
Xylene (Total)	mg/kg	ND	.15	.14	0.13	0.10	90	74	15-151	29	20	RS
4-Bromofluorobenzene (S)	%						100	94	51-142			
Dibromofluoromethane (S)	%						101	97	69-136			
Toluene-d8 (S)	%						107	106	64-150			

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 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Add. Investigation

Pace Project No.: 50176495

QC Batch:	400133	Analysis Method:	SM 2540G
QC Batch Method:	SM 2540G	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	50176495001, 50176495002, 50176495003, 50176495004		

SAMPLE DUPLICATE: 1842418

Parameter	Units	50176495004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	13.8	14.1	2	5	

SAMPLE DUPLICATE: 1842419

Parameter	Units	50177002003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.6	11.3	3	5	

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REPORT OF LABORATORY ANALYSIS



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 (317)228-3100

QUALIFIERS

Project: Houghland Add. Investigation

Pace Project No.: 50176495

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- N2 The lab does not hold NELAC/TNI accreditation for this parameter.
- R1 RPD value was outside control limits.
- RS The RPD value in one of the constituent analytes was outside the control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Houghland Add. Investigation
 Pace Project No.: 50176495

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50176495005	PB 41 (30-34)	EPA 8260	399113		
50176495006	PB 41 (24-28)	EPA 8260	399113		
50176495007	PB 41 (15-20)	EPA 8260	399113		
50176495008	Trip Blank	EPA 8260	399113		
50176495001	PB 38 (0-2)	EPA 8260	399334		
50176495002	PB 38 (8-10)	EPA 8260	399334		
50176495003	PB 39 (0-2)	EPA 8260	399334		
50176495004	PB 39 (3-5)	EPA 8260	399334		
50176495001	PB 38 (0-2)	SM 2540G	400133		
50176495002	PB 38 (8-10)	SM 2540G	400133		
50176495003	PB 39 (0-2)	SM 2540G	400133		
50176495004	PB 39 (3-5)	SM 2540G	400133		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a **LEGAL DOCUMENT**. All relevant fields must be completed accurately.

Pace Analytical®
www.paceanalytical.com

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: 110101 ENGINEERING	Report To: WVIE CASPER Copy To: JAMES COY	Address: 150 E 75th St	Purchase Order No.: 11010100000000000000	Attention: INDIANAPOLIS, IN	Project Name: 1101010000 ADDITIONAL INFORMATION
Email To: MCOSTA@pathogenic.com	Fax: 317-269-0860	Phone: 317-269-0860	Project Number: 110101-0905-016	Pace Quote Reference: Pace Project Manager: Pace Profile #:	
Section D Required Client Information		SAMPLE ID		Section E Regulatory Agency	
ITEM #	Sample IDs MUST BE UNIQUE (A-Z, 0-9, -,)	MATRIX CODES MATRIX / CODE	COLLECTED	NPDES	GROUND WATER
1	PC 33 (0-3)	Drinking Water	COMPOSITE START	<input type="checkbox"/>	<input type="checkbox"/>
2	PC 33 (3-0)	Water	COMPOSITE ENDPOINT	<input type="checkbox"/>	<input type="checkbox"/>
3	PC 33 (0-3)	Water	COMPOSITE ENDPOINT	<input type="checkbox"/>	<input type="checkbox"/>
4	PC 33 (3-5)	Product	COMPOSITE ENDPOINT	<input type="checkbox"/>	<input type="checkbox"/>
5	PC 33 (30-34)	Soil/Solid	COMPOSITE ENDPOINT	<input type="checkbox"/>	<input type="checkbox"/>
6	PC 33 (24-33)	Oil	COMPOSITE ENDPOINT	<input type="checkbox"/>	<input type="checkbox"/>
7	PC 33 (5-20)	Wipe	COMPOSITE ENDPOINT	<input type="checkbox"/>	<input type="checkbox"/>
8	PC 33 (5-20)	Air	COMPOSITE ENDPOINT	<input type="checkbox"/>	<input type="checkbox"/>
9		Tissue	COMPOSITE ENDPOINT	<input type="checkbox"/>	<input type="checkbox"/>
10		Other	COMPOSITE ENDPOINT	<input type="checkbox"/>	<input type="checkbox"/>
11				<input type="checkbox"/>	<input type="checkbox"/>
12				<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments		RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION
Agencies present - NO NOC IN LANS		JAMES COY/PATHOLOGY	10/23/2007	11:00	11/07/2007
12		SAMPLE NAME AND SIGNATURE	DATE	TIME	SAMPLE CONDITIONS
		ORIGINAL	11/07/2007	11:00	See SCUR
PRINT Name of SAMPLER:		JAMES COY	DATE Signed (MM/DD/YY):	11/07/2007	
SIGNATURE of SAMPLER:		JAMES COY	DATE Signed (MM/DD/YY):	11/07/2007	
Temp In C					
Received on Date (MM/DD/YY):					
Customer Seal/Coder (N/A)					
Samples intact (N/A)					

Sample Condition Upon Receipt*Pace Analytical*Project # 50176 495Courier: FedEx UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes NoPacking Material: Bubble Wrap Bubble Bags None Other foam blockThermometer 1 2 3 4 5 6 A B C D E F Type of Ice: Wet Blue None Samples on ice, cooling process has begunCooler Temperature 5.2 ~ 8.2 Ice Visible in Sample Containers: Yes No
(Initial/Corrected) Temp should be above freezing to 6°C

Date/Time and Initials of person examining contents: <u>PM 7-28-17</u>		Comments
Are samples from West Virginia? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		1.
Document any containers out of temp.		
Chain of Custody Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3.
Short Hold Time Analysis (<72hr): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<u>T/C</u> Date/Time 5035A T/C placed in Freezer: <u>1428</u> Short Holds Taken to Lab: _____
Rush Turn Around Time Requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		5.
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		6.
Sample Labels match COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No -Includes date/time/ID/Analysis		7.
All containers needing acid/base pres. have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		8. (Circle) HNO3 H2SO4 NaOH NaOH/ZnAc
exceptions: VOA, coliform, O&G		
All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.		
Residual Chlorine Check (SVOC 625 Pest/PCB 608)		9. Present Absent
Residual Chlorine Check (Total/Amenable/Free Cyanide)		10. Present Absent
Headspace in VOA Vials (>6mm): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		11. <u>PB41 2-3 MSO 1-3, TB 2-3</u>
Headspace Wisconsin Sulfide <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		12.
Trip Blank Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seals <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		13.

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Sample Container Count

CLIENT: Patriot

COC PAGE 1 of 1
COC ID# 2097229

SBS
EX

Project # SQ176495

Sample Line Item	AG1U	WG FU	AG0U	R	BP2N	BP2U	BP2S	BP3N	BP3U	BP3S	AG1H	BP1U	SP5T	AC2U	pH <2	pH >9	pH >12
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

Container Codes

DG9H	40mL HCl amber vial	AG0U	100mL unpreserved amber glass	BP1N	1 liter HNO3 plastic	DG9P	40mL TSP amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCl amber glass	BP1S	1 liter H2SO4 plastic	DG9S	40ml H2SO4 amber vial
WG FU	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	DG9T	40mL Na Thio amber vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber glass	BP1Z	1 liter NaOH, Zn, Ac	DG9U	40ml unpreserved amber vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	SP5T	120mL Coliform Na Thiosulfate
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2O	500mL NaOH plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber glass	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber glass	AF	Air Filter	VG9H	40ml HCL clear vial
BP3U	250mL unpreserved plastic	BG1H	1 liter HCl clear glass	BP3B	250mL NaOH plastic	VG9T	40mL Na Thio, Clear vial
BP3S	250mL H2SO4 plastic	BG1S	1 liter H2SO4 clear glass	BP3Z	250mL NaOH, Zn Ac plastic	VG9U	40ml unpreserved clear vial
AG3S	250mL H2SO4 glass amber	BG1T	1 liter Na Thiosulfate clear glass	C	Air Cassettes	VSG	Headspace septa vial & HCL
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	DG9B	40mL Na Bisulfite amber vial	WGFX	4oz wide jar w/ hexane wipe
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag

APPENDIX F

GROUNDWATER LABORATORY ANALYTICAL REPORT



Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

August 25, 2017

Mr. Mike Casper
Patriot Engineering
6150 E. 75th St.
Indianapolis, IN 46250

RE: Project: Houghland Canning
Pace Project No.: 50178310

Dear Mr. Casper:

Enclosed are the analytical results for sample(s) received by the laboratory on August 23, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Tina Sayer".

Tina Sayer
tina.sayer@pacelabs.com
(317)228-3100
Project Manager

Enclosures

cc: Mr. James Cody, Patriot Engineering
Ms. Kendra Grossman, Patriot



REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Houghland Canning
Pace Project No.: 50178310

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 003971
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WV Certification #: 98019

Ohio VAP Certification #: CL-0065
Oklahoma Certification #: 2016-075
Texas Certification #: T104704355-16-10
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

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 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

SAMPLE SUMMARY

Project: Houghland Canning
 Pace Project No.: 50178310

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50178310001	MW10	Water	08/21/17 15:00	08/23/17 09:10
50178310002	MW11	Water	08/22/17 12:25	08/23/17 09:10
50178310003	MW12	Water	08/22/17 09:05	08/23/17 09:10
50178310004	MW13	Water	08/22/17 17:40	08/23/17 09:10
50178310005	MW14	Water	08/22/17 14:35	08/23/17 09:10
50178310006	MW15	Water	08/22/17 13:50	08/23/17 09:10
50178310007	MW16	Water	08/22/17 12:00	08/23/17 09:10
50178310008	MW20	Water	08/21/17 13:15	08/23/17 09:10
50178310009	MW21	Water	08/21/17 12:40	08/23/17 09:10
50178310010	MW22	Water	08/22/17 10:45	08/23/17 09:10
50178310011	MW23	Water	08/22/17 16:10	08/23/17 09:10
50178310012	MW24	Water	08/21/17 12:40	08/23/17 09:10
50178310013	MW26	Water	08/22/17 09:20	08/23/17 09:10
50178310014	MW27	Water	08/21/17 13:50	08/23/17 09:10
50178310015	MW28	Water	08/22/17 11:10	08/23/17 09:10
50178310016	MW29	Water	08/21/17 14:40	08/23/17 09:10
50178310017	MW30	Water	08/22/17 13:55	08/23/17 09:10
50178310018	MW31	Water	08/22/17 16:05	08/23/17 09:10
50178310019	MW32	Water	08/21/17 16:25	08/23/17 09:10
50178310020	DUP	Water	08/22/17 08:00	08/23/17 09:10
50178310021	TRIP BLANK	Water	08/22/17 08:00	08/23/17 09:10

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

SAMPLE ANALYTE COUNT

Project: Houghland Canning
 Pace Project No.: 50178310

Lab ID	Sample ID	Method	Analysts	Analytics Reported
50178310001	MW10	EPA 8260	JLZ	75
50178310002	MW11	EPA 8260	JLZ	75
50178310003	MW12	EPA 8260	JLZ	75
50178310004	MW13	EPA 8260	JLZ	75
50178310005	MW14	EPA 8260	JLZ	75
50178310006	MW15	EPA 8260	JLZ	75
50178310007	MW16	EPA 8260	JLZ	75
50178310008	MW20	EPA 8260	JLZ	75
50178310009	MW21	EPA 8260	JLZ	75
50178310010	MW22	EPA 8260	JLZ	75
50178310011	MW23	EPA 8260	JLZ	75
50178310012	MW24	EPA 8260	JLZ	75
50178310013	MW26	EPA 8260	JLZ	75
50178310014	MW27	EPA 8260	JLZ	75
50178310015	MW28	EPA 8260	JLZ	75
50178310016	MW29	EPA 8260	JLZ	75
50178310017	MW30	EPA 8260	JLZ	75
50178310018	MW31	EPA 8260	JLZ	75
50178310019	MW32	EPA 8260	JLZ	75
50178310020	DUP	EPA 8260	JLZ	75
50178310021	TRIP BLANK	EPA 8260	JLZ	75

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

SUMMARY OF DETECTION

Project: Houghland Canning
 Pace Project No.: 50178310

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50178310002	MW11					
EPA 8260	Tetrachloroethene	124	ug/L	5.0	08/25/17 00:40	
EPA 8260	Trichloroethene	82.4	ug/L	5.0	08/25/17 00:40	
50178310006	MW15					
EPA 8260	Trichloroethene	42.3	ug/L	5.0	08/25/17 02:47	
50178310010	MW22					
EPA 8260	Tetrachloroethene	9.6	ug/L	5.0	08/25/17 04:55	
EPA 8260	Trichloroethene	86.4	ug/L	5.0	08/25/17 04:55	
50178310011	MW23					
EPA 8260	Tetrachloroethene	115	ug/L	5.0	08/25/17 05:27	
EPA 8260	Trichloroethene	234	ug/L	5.0	08/25/17 05:27	
50178310012	MW24					
EPA 8260	Tetrachloroethene	167	ug/L	5.0	08/25/17 00:24	
EPA 8260	Trichloroethene	59.0	ug/L	5.0	08/25/17 00:24	
50178310013	MW26					
EPA 8260	Tetrachloroethene	21.8	ug/L	5.0	08/25/17 00:56	
EPA 8260	Trichloroethene	48.0	ug/L	5.0	08/25/17 00:56	
50178310015	MW28					
EPA 8260	cis-1,2-Dichloroethene	47.7	ug/L	5.0	08/25/17 01:59	
50178310016	MW29					
EPA 8260	Tetrachloroethene	13.4	ug/L	5.0	08/25/17 02:31	
EPA 8260	Trichloroethene	106	ug/L	5.0	08/25/17 02:31	
50178310017	MW30					
EPA 8260	Tetrachloroethene	475	ug/L	25.0	08/25/17 09:42	
EPA 8260	Trichloroethene	253	ug/L	5.0	08/25/17 03:03	
50178310018	MW31					
EPA 8260	Tetrachloroethene	5.7	ug/L	5.0	08/25/17 03:35	
50178310019	MW32					
EPA 8260	cis-1,2-Dichloroethene	19.1	ug/L	5.0	08/25/17 04:07	
EPA 8260	Tetrachloroethene	11.0	ug/L	5.0	08/25/17 04:07	
EPA 8260	Trichloroethene	26.9	ug/L	5.0	08/25/17 04:07	
50178310020	DUP					
EPA 8260	Tetrachloroethene	119	ug/L	5.0	08/25/17 04:39	
EPA 8260	Trichloroethene	236	ug/L	5.0	08/25/17 04:39	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW10 Lab ID: **50178310001** Collected: 08/21/17 15:00 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 00:08	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 00:08	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 00:08	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 00:08	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 00:08	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 00:08	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 00:08	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 00:08	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 00:08	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 00:08	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 00:08	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:08	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:08	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 00:08	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 00:08	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 00:08	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 00:08	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 00:08	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 00:08	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 00:08	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 00:08	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 00:08	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 00:08	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 00:08	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:08	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:08	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 00:08	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 00:08	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 00:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 00:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:08	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:08	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:08	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:08	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:08	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 00:08	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 00:08	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 00:08	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 00:08	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 00:08	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 00:08	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 00:08	98-82-8	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW10	Lab ID: 50178310001	Collected: 08/21/17 15:00	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 00:08	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 00:08	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 00:08	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 00:08	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 00:08	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 00:08	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 00:08	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 00:08	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 00:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 00:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 00:08	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 00:08	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 00:08	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:08	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:08	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 00:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 00:08	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 00:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 00:08	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 00:08	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 00:08	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 00:08	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 00:08	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 00:08	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 00:08	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%.	86-116	1		08/25/17 00:08	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	84-113	1		08/25/17 00:08	460-00-4	
Toluene-d8 (S)	97	%.	86-111	1		08/25/17 00:08	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW11 Lab ID: **50178310002** Collected: 08/22/17 12:25 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 00:40	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 00:40	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 00:40	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 00:40	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 00:40	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 00:40	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 00:40	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 00:40	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 00:40	74-83-9	
Bromomethane	ND	ug/L	25.0	1		08/25/17 00:40	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/25/17 00:40	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:40	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:40	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 00:40	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 00:40	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 00:40	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 00:40	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 00:40	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 00:40	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 00:40	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 00:40	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 00:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 00:40	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 00:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:40	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 00:40	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 00:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 00:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 00:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:40	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 00:40	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 00:40	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 00:40	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 00:40	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 00:40	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 00:40	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 00:40	98-82-8	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW11 Lab ID: **50178310002** Collected: 08/22/17 12:25 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 00:40	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 00:40	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 00:40	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 00:40	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 00:40	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 00:40	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 00:40	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 00:40	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 00:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 00:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 00:40	79-34-5	
Tetrachloroethene	124	ug/L	5.0	1		08/25/17 00:40	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 00:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 00:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 00:40	79-00-5	
Trichloroethene	82.4	ug/L	5.0	1		08/25/17 00:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 00:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 00:40	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 00:40	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 00:40	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 00:40	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 00:40	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 00:40	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	86-116	1		08/25/17 00:40	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	84-113	1		08/25/17 00:40	460-00-4	
Toluene-d8 (S)	98	%.	86-111	1		08/25/17 00:40	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW12	Lab ID: 50178310003	Collected: 08/22/17 09:05	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
Acetone	ND	ug/L	100	1		08/25/17 01:12	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 01:12	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 01:12	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 01:12	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 01:12	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 01:12	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 01:12	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 01:12	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 01:12	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 01:12	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 01:12	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 01:12	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 01:12	98-06-6	
tert-Butylbenzene	ND	ug/L	10.0	1		08/25/17 01:12	75-15-0	
Carbon disulfide	ND	ug/L	5.0	1		08/25/17 01:12	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 01:12	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 01:12	75-00-3	
Chloroethane	ND	ug/L	5.0	1		08/25/17 01:12	67-66-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 01:12	74-87-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 01:12	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 01:12	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 01:12	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 01:12	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 01:12	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 01:12	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:12	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:12	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:12	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 01:12	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 01:12	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 01:12	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 01:12	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:12	142-28-9	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:12	594-20-7	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:12	563-58-6	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:12	10061-01-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:12	10061-02-6	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:12	100-41-4	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:12	97-63-2	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:12	87-68-3	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:12	110-54-3	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 01:12	591-78-6	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 01:12	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 01:12	98-82-8	
n-Hexane	ND	ug/L	5.0	1		08/25/17 01:12	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 01:12	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 01:12	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 01:12		

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW12	Lab ID: 50178310003	Collected: 08/22/17 09:05	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 01:12	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 01:12	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 01:12	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 01:12	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 01:12	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 01:12	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 01:12	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 01:12	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 01:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 01:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 01:12	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 01:12	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 01:12	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:12	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:12	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 01:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 01:12	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 01:12	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 01:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 01:12	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 01:12	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 01:12	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 01:12	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 01:12	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 01:12	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%.	86-116	1		08/25/17 01:12	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	84-113	1		08/25/17 01:12	460-00-4	
Toluene-d8 (S)	97	%.	86-111	1		08/25/17 01:12	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW13 Lab ID: **50178310004** Collected: 08/22/17 17:40 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 01:44	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 01:44	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 01:44	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 01:44	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 01:44	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 01:44	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 01:44	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 01:44	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 01:44	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 01:44	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 01:44	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 01:44	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 01:44	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 01:44	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 01:44	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 01:44	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 01:44	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 01:44	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 01:44	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 01:44	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 01:44	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 01:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 01:44	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 01:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:44	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 01:44	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 01:44	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 01:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 01:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:44	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:44	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:44	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:44	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:44	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 01:44	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 01:44	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 01:44	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 01:44	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 01:44	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 01:44	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 01:44	98-82-8	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW13	Lab ID: 50178310004	Collected: 08/22/17 17:40	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 01:44	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 01:44	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 01:44	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 01:44	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 01:44	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 01:44	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 01:44	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 01:44	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 01:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 01:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 01:44	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 01:44	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 01:44	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:44	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 01:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 01:44	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 01:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 01:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 01:44	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 01:44	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 01:44	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 01:44	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 01:44	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 01:44	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%.	86-116	1		08/25/17 01:44	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	84-113	1		08/25/17 01:44	460-00-4	
Toluene-d8 (S)	97	%.	86-111	1		08/25/17 01:44	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW14 Lab ID: **50178310005** Collected: 08/22/17 14:35 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 02:15	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 02:15	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 02:15	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 02:15	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 02:15	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 02:15	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 02:15	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 02:15	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 02:15	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 02:15	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 02:15	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 02:15	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 02:15	98-06-6	
tert-Butylbenzene	ND	ug/L	10.0	1		08/25/17 02:15	75-15-0	
Carbon disulfide	ND	ug/L	5.0	1		08/25/17 02:15	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 02:15	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 02:15	75-00-3	
Chloroethane	ND	ug/L	5.0	1		08/25/17 02:15	67-66-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 02:15	74-87-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 02:15	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 02:15	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 02:15	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 02:15	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 02:15	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 02:15	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:15	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:15	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:15	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 02:15	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 02:15	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 02:15	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 02:15	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 02:15	156-58-6	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 02:15	10061-01-5	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 02:15	10061-02-6	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 02:15	142-28-9	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 02:15	594-20-7	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 02:15	100-41-4	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 02:15	97-63-2	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 02:15	87-68-3	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 02:15	87-68-3	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 02:15	110-54-3	
Ethyl methacrylate	ND	ug/L	25.0	1		08/25/17 02:15	591-78-6	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1		08/25/17 02:15	74-88-4	
n-Hexane	ND	ug/L	5.0	1		08/25/17 02:15	98-82-8	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 02:15		
Iodomethane	ND	ug/L	10.0	1		08/25/17 02:15		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 02:15		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW14 **Lab ID:** 50178310005 **Collected:** 08/22/17 14:35 **Received:** 08/23/17 09:10 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 02:15	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 02:15	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 02:15	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 02:15	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 02:15	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 02:15	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 02:15	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 02:15	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 02:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 02:15	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 02:15	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 02:15	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 02:15	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:15	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:15	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 02:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 02:15	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 02:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 02:15	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 02:15	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 02:15	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 02:15	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 02:15	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 02:15	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 02:15	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	86-116	1		08/25/17 02:15	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	84-113	1		08/25/17 02:15	460-00-4	
Toluene-d8 (S)	98	%.	86-111	1		08/25/17 02:15	2037-26-5	

REPORT OF LABORATORY ANALYSIS



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ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW15 Lab ID: **50178310006** Collected: 08/22/17 13:50 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 02:47	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 02:47	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 02:47	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 02:47	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 02:47	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 02:47	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 02:47	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 02:47	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 02:47	74-83-9	
Bromomethane	ND	ug/L	25.0	1		08/25/17 02:47	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/25/17 02:47	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 02:47	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 02:47	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 02:47	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 02:47	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 02:47	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 02:47	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 02:47	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 02:47	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 02:47	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 02:47	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 02:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 02:47	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 02:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:47	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 02:47	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 02:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 02:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 02:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 02:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 02:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 02:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 02:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 02:47	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 02:47	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 02:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 02:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 02:47	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 02:47	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 02:47	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 02:47	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 02:47	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 02:47	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 02:47	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 02:47	98-82-8	

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 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW15 Lab ID: **50178310006** Collected: 08/22/17 13:50 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 02:47	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 02:47	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 02:47	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 02:47	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 02:47	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 02:47	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 02:47	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 02:47	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 02:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 02:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 02:47	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 02:47	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 02:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 02:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 02:47	79-00-5	
Trichloroethene	42.3	ug/L	5.0	1		08/25/17 02:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 02:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 02:47	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 02:47	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 02:47	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 02:47	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 02:47	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 02:47	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	86-116	1		08/25/17 02:47	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	84-113	1		08/25/17 02:47	460-00-4	
Toluene-d8 (S)	97	%.	86-111	1		08/25/17 02:47	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW16 Lab ID: **50178310007** Collected: 08/22/17 12:00 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 03:19	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 03:19	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 03:19	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 03:19	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 03:19	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 03:19	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 03:19	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 03:19	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 03:19	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 03:19	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 03:19	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 03:19	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 03:19	98-06-6	
tert-Butylbenzene	ND	ug/L	10.0	1		08/25/17 03:19	75-15-0	
Carbon disulfide	ND	ug/L	5.0	1		08/25/17 03:19	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 03:19	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 03:19	75-00-3	
Chloroethane	ND	ug/L	5.0	1		08/25/17 03:19	67-66-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 03:19	74-87-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 03:19	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 03:19	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 03:19	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 03:19	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 03:19	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 03:19	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:19	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:19	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:19	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 03:19	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 03:19	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 03:19	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 03:19	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:19	156-58-6	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:19	10061-01-5	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:19	10061-02-6	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:19	142-28-9	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:19	594-20-7	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:19	100-41-4	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:19	97-63-2	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:19	87-68-3	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:19	110-54-3	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 03:19	591-78-6	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 03:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 03:19	98-88-4	
n-Hexane	ND	ug/L	5.0	1		08/25/17 03:19	100-61-0	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 03:19	98-82-8	
Iodomethane	ND	ug/L	10.0	1		08/25/17 03:19		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 03:19		

REPORT OF LABORATORY ANALYSIS

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 7726 Moller Road
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 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW16	Lab ID: 50178310007	Collected: 08/22/17 12:00	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 03:19	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 03:19	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 03:19	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 03:19	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 03:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 03:19	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 03:19	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 03:19	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 03:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 03:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 03:19	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 03:19	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 03:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 03:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 03:19	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 03:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 03:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 03:19	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 03:19	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 03:19	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 03:19	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 03:19	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 03:19	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	86-116	1		08/25/17 03:19	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	84-113	1		08/25/17 03:19	460-00-4	
Toluene-d8 (S)	97	%.	86-111	1		08/25/17 03:19	2037-26-5	

REPORT OF LABORATORY ANALYSIS



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ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW20 Lab ID: **50178310008** Collected: 08/21/17 13:15 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 03:51	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 03:51	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 03:51	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 03:51	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 03:51	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 03:51	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 03:51	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 03:51	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 03:51	74-83-9	
Bromomethane	ND	ug/L	25.0	1		08/25/17 03:51	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/25/17 03:51	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 03:51	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 03:51	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 03:51	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 03:51	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 03:51	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 03:51	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 03:51	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 03:51	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 03:51	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 03:51	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 03:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 03:51	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 03:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:51	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 03:51	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 03:51	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 03:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 03:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:51	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:51	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:51	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:51	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:51	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 03:51	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 03:51	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 03:51	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 03:51	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 03:51	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 03:51	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 03:51	98-82-8	

REPORT OF LABORATORY ANALYSIS



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ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW20 Lab ID: **50178310008** Collected: 08/21/17 13:15 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 03:51	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 03:51	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 03:51	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 03:51	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 03:51	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 03:51	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 03:51	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 03:51	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 03:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 03:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 03:51	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 03:51	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 03:51	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:51	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 03:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 03:51	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 03:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 03:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 03:51	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 03:51	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 03:51	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 03:51	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 03:51	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 03:51	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	86-116	1		08/25/17 03:51	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	84-113	1		08/25/17 03:51	460-00-4	
Toluene-d8 (S)	98	%.	86-111	1		08/25/17 03:51	2037-26-5	

REPORT OF LABORATORY ANALYSIS



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ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW21	Lab ID: 50178310009	Collected: 08/21/17 12:40	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
Acetone	ND	ug/L	100	1		08/25/17 04:23	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 04:23	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 04:23	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 04:23	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 04:23	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 04:23	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 04:23	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 04:23	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 04:23	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 04:23	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 04:23	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:23	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:23	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:23	106-46-7	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 04:23	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 04:23	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 04:23	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 04:23	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 04:23	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 04:23	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 04:23	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 04:23	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 04:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 04:23	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 04:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:23	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 04:23	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 04:23	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 04:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 04:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:23	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:23	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:23	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 04:23	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 04:23	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 04:23	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 04:23	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 04:23	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 04:23	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 04:23	98-82-8	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW21	Lab ID: 50178310009	Collected: 08/21/17 12:40	Received: 08/23/17 09:10	Matrix: Water
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 04:23	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 04:23	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 04:23	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 04:23	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 04:23	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 04:23	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 04:23	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 04:23	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 04:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 04:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 04:23	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 04:23	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 04:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 04:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 04:23	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 04:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 04:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 04:23	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 04:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 04:23	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 04:23	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 04:23	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 04:23	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	86-116	1		08/25/17 04:23	1868-53-7	
4-Bromofluorobenzene (S)	99	%.	84-113	1		08/25/17 04:23	460-00-4	
Toluene-d8 (S)	98	%.	86-111	1		08/25/17 04:23	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW22 Lab ID: **50178310010** Collected: 08/22/17 10:45 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 04:55	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 04:55	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 04:55	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 04:55	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 04:55	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 04:55	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 04:55	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 04:55	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 04:55	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 04:55	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 04:55	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:55	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:55	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:55	75-15-0	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 04:55	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 04:55	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 04:55	75-00-3	
Chloroethane	ND	ug/L	5.0	1		08/25/17 04:55	67-66-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 04:55	74-87-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 04:55	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 04:55	124-48-1	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 04:55	106-93-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 04:55	106-46-7	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 04:55	110-57-6	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 04:55	541-73-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:55	74-95-3	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:55	156-59-2	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:55	156-60-5	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 04:55	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 04:55	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 04:55	110-54-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 04:55	112-35-4	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:55	142-28-9	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:55	594-20-7	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:55	563-58-6	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:55	10061-01-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:55	10061-02-6	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:55	100-41-4	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:55	97-63-2	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:55	87-68-3	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:55	110-54-3	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 04:55	591-78-6	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 04:55	74-88-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 04:55	98-82-8	
n-Hexane	ND	ug/L	5.0	1		08/25/17 04:55		
2-Hexanone	ND	ug/L	25.0	1		08/25/17 04:55		
Iodomethane	ND	ug/L	10.0	1		08/25/17 04:55		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 04:55		

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW22 Lab ID: **50178310010** Collected: 08/22/17 10:45 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 04:55	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 04:55	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 04:55	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 04:55	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 04:55	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 04:55	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 04:55	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 04:55	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 04:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 04:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 04:55	79-34-5	
Tetrachloroethene	9.6	ug/L	5.0	1		08/25/17 04:55	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 04:55	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:55	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:55	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 04:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 04:55	79-00-5	
Trichloroethene	86.4	ug/L	5.0	1		08/25/17 04:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 04:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 04:55	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 04:55	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 04:55	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 04:55	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 04:55	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 04:55	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	95	%.	86-116	1		08/25/17 04:55	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	84-113	1		08/25/17 04:55	460-00-4	
Toluene-d8 (S)	99	%.	86-111	1		08/25/17 04:55	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW23 Lab ID: **50178310011** Collected: 08/22/17 16:10 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 05:27	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 05:27	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 05:27	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 05:27	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 05:27	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 05:27	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 05:27	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 05:27	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 05:27	74-83-9	
Bromomethane	ND	ug/L	25.0	1		08/25/17 05:27	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/25/17 05:27	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 05:27	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 05:27	98-06-6	
tert-Butylbenzene	ND	ug/L	10.0	1		08/25/17 05:27	75-15-0	
Carbon disulfide	ND	ug/L	5.0	1		08/25/17 05:27	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 05:27	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 05:27	75-00-3	
Chloroethane	ND	ug/L	5.0	1		08/25/17 05:27	67-66-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 05:27	74-87-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 05:27	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 05:27	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 05:27	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 05:27	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 05:27	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 05:27	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:27	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:27	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:27	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 05:27	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 05:27	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 05:27	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 05:27	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 05:27	156-58-6	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 05:27	10061-01-5	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 05:27	142-28-9	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 05:27	594-20-7	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 05:27	563-58-6	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 05:27	10061-02-6	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 05:27	100-41-4	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 05:27	97-63-2	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 05:27	87-68-3	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 05:27	110-54-3	
Ethyl methacrylate	ND	ug/L	25.0	1		08/25/17 05:27	591-78-6	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1		08/25/17 05:27	74-88-4	
n-Hexane	ND	ug/L	5.0	1		08/25/17 05:27	98-82-8	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 05:27		
Iodomethane	ND	ug/L	10.0	1		08/25/17 05:27		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 05:27		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW23 Lab ID: **50178310011** Collected: 08/22/17 16:10 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 05:27	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 05:27	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 05:27	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 05:27	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 05:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 05:27	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 05:27	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 05:27	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 05:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 05:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 05:27	79-34-5	
Tetrachloroethene	115	ug/L	5.0	1		08/25/17 05:27	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 05:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 05:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 05:27	79-00-5	
Trichloroethene	234	ug/L	5.0	1		08/25/17 05:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 05:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 05:27	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 05:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 05:27	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 05:27	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 05:27	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 05:27	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	95	%.	86-116	1		08/25/17 05:27	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	84-113	1		08/25/17 05:27	460-00-4	
Toluene-d8 (S)	97	%.	86-111	1		08/25/17 05:27	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW24 Lab ID: **50178310012** Collected: 08/21/17 12:40 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 00:24	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 00:24	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 00:24	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 00:24	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 00:24	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 00:24	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 00:24	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 00:24	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 00:24	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 00:24	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 00:24	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:24	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:24	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:24	75-15-0	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 00:24	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 00:24	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 00:24	75-00-3	
Chloroethane	ND	ug/L	5.0	1		08/25/17 00:24	67-66-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 00:24	74-87-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 00:24	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 00:24	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 00:24	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 00:24	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 00:24	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 00:24	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:24	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:24	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:24	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 00:24	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 00:24	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 00:24	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 00:24	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:24	78-87-5	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:24	142-28-9	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:24	594-20-7	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:24	563-58-6	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:24	10061-01-5	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:24	10061-02-6	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:24	100-41-4	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:24	97-63-2	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:24	87-68-3	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 00:24	110-54-3	
Ethyl methacrylate	ND	ug/L	25.0	1		08/25/17 00:24	591-78-6	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	1		08/25/17 00:24	74-88-4	
n-Hexane	ND	ug/L	5.0	1		08/25/17 00:24	98-82-8	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 00:24		
Iodomethane	ND	ug/L	10.0	1		08/25/17 00:24		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 00:24		

REPORT OF LABORATORY ANALYSIS

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 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW24	Lab ID: 50178310012	Collected: 08/21/17 12:40	Received: 08/23/17 09:10	Matrix: Water
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 00:24	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 00:24	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 00:24	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 00:24	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 00:24	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 00:24	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 00:24	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 00:24	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 00:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 00:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 00:24	79-34-5	
Tetrachloroethene	167	ug/L	5.0	1		08/25/17 00:24	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 00:24	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:24	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:24	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 00:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 00:24	79-00-5	
Trichloroethene	59.0	ug/L	5.0	1		08/25/17 00:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 00:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 00:24	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 00:24	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 00:24	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 00:24	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 00:24	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 00:24	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	86-116	1		08/25/17 00:24	1868-53-7	
4-Bromofluorobenzene (S)	101	%.	84-113	1		08/25/17 00:24	460-00-4	
Toluene-d8 (S)	102	%.	86-111	1		08/25/17 00:24	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
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 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW26 Lab ID: **50178310013** Collected: 08/22/17 09:20 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 00:56	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 00:56	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 00:56	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 00:56	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 00:56	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 00:56	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 00:56	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 00:56	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 00:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 00:56	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:56	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:56	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		08/25/17 00:56	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 00:56	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 00:56	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 00:56	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 00:56	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 00:56	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 00:56	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 00:56	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 00:56	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 00:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 00:56	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 00:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:56	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 00:56	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 00:56	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 00:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 00:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 00:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:56	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:56	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 00:56	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:56	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 00:56	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 00:56	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 00:56	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 00:56	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 00:56	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 00:56	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 00:56	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 00:56	98-82-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW26 Lab ID: 50178310013 Collected: 08/22/17 09:20 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 00:56	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 00:56	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 00:56	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 00:56	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 00:56	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 00:56	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 00:56	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 00:56	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 00:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 00:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 00:56	79-34-5	
Tetrachloroethene	21.8	ug/L	5.0	1		08/25/17 00:56	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 00:56	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:56	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 00:56	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 00:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 00:56	79-00-5	
Trichloroethene	48.0	ug/L	5.0	1		08/25/17 00:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 00:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 00:56	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 00:56	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 00:56	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 00:56	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 00:56	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 00:56	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	86-116	1		08/25/17 00:56	1868-53-7	
4-Bromofluorobenzene (S)	99	%.	84-113	1		08/25/17 00:56	460-00-4	
Toluene-d8 (S)	101	%.	86-111	1		08/25/17 00:56	2037-26-5	

REPORT OF LABORATORY ANALYSIS



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ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW27 Lab ID: **50178310014** Collected: 08/21/17 13:50 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 01:27	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 01:27	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 01:27	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 01:27	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 01:27	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 01:27	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 01:27	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 01:27	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 01:27	74-83-9	
Bromomethane	ND	ug/L	25.0	1		08/25/17 01:27	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/25/17 01:27	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 01:27	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 01:27	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 01:27	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 01:27	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 01:27	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 01:27	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 01:27	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 01:27	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 01:27	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 01:27	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 01:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 01:27	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 01:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:27	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 01:27	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 01:27	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 01:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 01:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:27	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:27	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:27	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:27	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:27	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 01:27	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 01:27	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 01:27	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 01:27	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 01:27	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 01:27	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 01:27	98-82-8	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
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 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW27 Lab ID: **50178310014** Collected: 08/21/17 13:50 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 01:27	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 01:27	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 01:27	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 01:27	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 01:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 01:27	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 01:27	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 01:27	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 01:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 01:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 01:27	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 01:27	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 01:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 01:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 01:27	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 01:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 01:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 01:27	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 01:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 01:27	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 01:27	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 01:27	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 01:27	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	95	%.	86-116	1		08/25/17 01:27	1868-53-7	
4-Bromofluorobenzene (S)	99	%.	84-113	1		08/25/17 01:27	460-00-4	
Toluene-d8 (S)	100	%.	86-111	1		08/25/17 01:27	2037-26-5	

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ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW28 Lab ID: **50178310015** Collected: 08/22/17 11:10 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 01:59	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 01:59	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 01:59	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 01:59	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 01:59	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 01:59	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 01:59	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 01:59	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 01:59	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 01:59	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 01:59	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 01:59	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 01:59	98-06-6	
tert-Butylbenzene	ND	ug/L	5.0	1		08/25/17 01:59	75-15-0	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 01:59	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 01:59	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 01:59	75-00-3	
Chloroethane	ND	ug/L	5.0	1		08/25/17 01:59	67-66-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 01:59	74-87-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 01:59	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 01:59	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 01:59	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 01:59	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 01:59	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 01:59	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:59	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:59	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:59	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 01:59	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 01:59	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 01:59	107-06-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 01:59	75-35-4	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:59	156-59-2	
cis-1,2-Dichloroethene	47.7	ug/L	5.0	1		08/25/17 01:59	156-60-5	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 01:59	78-87-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:59	142-28-9	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:59	594-20-7	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 01:59	563-58-6	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:59	10061-01-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:59	10061-02-6	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 01:59	100-41-4	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 01:59	97-63-2	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 01:59	87-68-3	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 01:59	591-78-6	
n-Hexane	ND	ug/L	5.0	1		08/25/17 01:59	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 01:59	74-88-4	
Iodomethane	ND	ug/L	10.0	1		08/25/17 01:59	98-82-8	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 01:59		

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW28 Lab ID: **50178310015** Collected: 08/22/17 11:10 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 01:59	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 01:59	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 01:59	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 01:59	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 01:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 01:59	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 01:59	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 01:59	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 01:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 01:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 01:59	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 01:59	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 01:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 01:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 01:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 01:59	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 01:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 01:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 01:59	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 01:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 01:59	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 01:59	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 01:59	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 01:59	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	95	%.	86-116	1		08/25/17 01:59	1868-53-7	
4-Bromofluorobenzene (S)	99	%.	84-113	1		08/25/17 01:59	460-00-4	
Toluene-d8 (S)	101	%.	86-111	1		08/25/17 01:59	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW29	Lab ID: 50178310016	Collected: 08/21/17 14:40	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
Acetone	ND	ug/L	100	1		08/25/17 02:31	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 02:31	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 02:31	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 02:31	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 02:31	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 02:31	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 02:31	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 02:31	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 02:31	74-83-9	
Bromomethane	ND	ug/L	25.0	1		08/25/17 02:31	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/25/17 02:31	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 02:31	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 02:31	98-06-6	
tert-Butylbenzene	ND	ug/L	10.0	1		08/25/17 02:31	75-15-0	
Carbon disulfide	ND	ug/L	5.0	1		08/25/17 02:31	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 02:31	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 02:31	75-00-3	
Chloroethane	ND	ug/L	5.0	1		08/25/17 02:31	67-66-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 02:31	74-87-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 02:31	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 02:31	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 02:31	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 02:31	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 02:31	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 02:31	95-50-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:31	541-73-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:31	106-46-7	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:31	110-57-6	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 02:31	75-34-3	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 02:31	107-06-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 02:31	156-59-2	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 02:31	156-60-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 02:31	156-58-6	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 02:31	10061-01-5	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 02:31	10061-02-6	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 02:31	142-28-9	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 02:31	594-20-7	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 02:31	100-41-4	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 02:31	97-63-2	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 02:31	87-68-3	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 02:31	110-54-3	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 02:31	591-78-6	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 02:31	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 02:31	98-82-8	
n-Hexane	ND	ug/L	5.0	1		08/25/17 02:31	100-58-6	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 02:31	100-41-4	
Iodomethane	ND	ug/L	10.0	1		08/25/17 02:31	124-48-1	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 02:31	135-98-8	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW29 Lab ID: **50178310016** Collected: 08/21/17 14:40 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 02:31	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 02:31	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 02:31	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 02:31	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 02:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 02:31	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 02:31	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 02:31	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 02:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 02:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 02:31	79-34-5	
Tetrachloroethene	13.4	ug/L	5.0	1		08/25/17 02:31	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 02:31	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:31	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 02:31	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 02:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 02:31	79-00-5	
Trichloroethene	106	ug/L	5.0	1		08/25/17 02:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 02:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 02:31	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 02:31	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 02:31	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 02:31	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 02:31	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 02:31	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	95	%.	86-116	1		08/25/17 02:31	1868-53-7	
4-Bromofluorobenzene (S)	97	%.	84-113	1		08/25/17 02:31	460-00-4	
Toluene-d8 (S)	100	%.	86-111	1		08/25/17 02:31	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW30 Lab ID: **50178310017** Collected: 08/22/17 13:55 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 03:03	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 03:03	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 03:03	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 03:03	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 03:03	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 03:03	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 03:03	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 03:03	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 03:03	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 03:03	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 03:03	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 03:03	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 03:03	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 03:03	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 03:03	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 03:03	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 03:03	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 03:03	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 03:03	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 03:03	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 03:03	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 03:03	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 03:03	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 03:03	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:03	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:03	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:03	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 03:03	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 03:03	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 03:03	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 03:03	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:03	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:03	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:03	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:03	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:03	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:03	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:03	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:03	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:03	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 03:03	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 03:03	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 03:03	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 03:03	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 03:03	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 03:03	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 03:03	98-82-8	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW30	Lab ID: 50178310017	Collected: 08/22/17 13:55	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 03:03	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 03:03	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 03:03	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 03:03	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 03:03	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 03:03	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 03:03	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 03:03	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 03:03	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 03:03	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 03:03	79-34-5	
Tetrachloroethene	475	ug/L	25.0	5		08/25/17 09:42	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 03:03	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:03	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:03	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 03:03	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 03:03	79-00-5	
Trichloroethene	253	ug/L	5.0	1		08/25/17 03:03	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 03:03	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 03:03	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 03:03	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 03:03	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 03:03	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 03:03	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 03:03	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	92	%.	86-116	1		08/25/17 03:03	1868-53-7	
4-Bromofluorobenzene (S)	99	%.	84-113	1		08/25/17 03:03	460-00-4	
Toluene-d8 (S)	101	%.	86-111	1		08/25/17 03:03	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW31 Lab ID: **50178310018** Collected: 08/22/17 16:05 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 03:35	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 03:35	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 03:35	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 03:35	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 03:35	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 03:35	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 03:35	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 03:35	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 03:35	74-83-9	
Bromomethane	ND	ug/L	25.0	1		08/25/17 03:35	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/25/17 03:35	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 03:35	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 03:35	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 03:35	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 03:35	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 03:35	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 03:35	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 03:35	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 03:35	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 03:35	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 03:35	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 03:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 03:35	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 03:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:35	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 03:35	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 03:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 03:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 03:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 03:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:35	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 03:35	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 03:35	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 03:35	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 03:35	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 03:35	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 03:35	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 03:35	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 03:35	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 03:35	98-82-8	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW31 **Lab ID:** 50178310018 **Collected:** 08/22/17 16:05 **Received:** 08/23/17 09:10 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 03:35	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 03:35	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 03:35	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 03:35	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 03:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 03:35	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 03:35	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 03:35	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 03:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 03:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 03:35	79-34-5	
Tetrachloroethene	5.7	ug/L	5.0	1		08/25/17 03:35	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 03:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 03:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 03:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 03:35	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 03:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 03:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 03:35	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 03:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 03:35	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 03:35	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 03:35	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 03:35	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%.	86-116	1		08/25/17 03:35	1868-53-7	
4-Bromofluorobenzene (S)	99	%.	84-113	1		08/25/17 03:35	460-00-4	
Toluene-d8 (S)	101	%.	86-111	1		08/25/17 03:35	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: MW32 Lab ID: **50178310019** Collected: 08/21/17 16:25 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 04:07	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 04:07	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 04:07	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 04:07	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 04:07	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 04:07	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 04:07	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 04:07	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 04:07	74-83-9	
Bromomethane	ND	ug/L	25.0	1		08/25/17 04:07	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/25/17 04:07	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:07	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:07	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 04:07	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 04:07	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 04:07	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 04:07	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 04:07	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 04:07	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 04:07	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 04:07	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 04:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 04:07	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 04:07	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:07	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 04:07	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 04:07	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 04:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 04:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:07	75-35-4	
cis-1,2-Dichloroethene	19.1	ug/L	5.0	1		08/25/17 04:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:07	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:07	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:07	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:07	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:07	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 04:07	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 04:07	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 04:07	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 04:07	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 04:07	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 04:07	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 04:07	98-82-8	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: MW32 Lab ID: **50178310019** Collected: 08/21/17 16:25 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 04:07	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 04:07	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 04:07	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 04:07	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 04:07	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 04:07	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 04:07	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 04:07	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 04:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 04:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 04:07	79-34-5	
Tetrachloroethene	11.0	ug/L	5.0	1		08/25/17 04:07	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 04:07	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:07	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:07	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 04:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 04:07	79-00-5	
Trichloroethene	26.9	ug/L	5.0	1		08/25/17 04:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 04:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 04:07	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 04:07	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 04:07	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 04:07	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 04:07	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 04:07	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	86-116	1		08/25/17 04:07	1868-53-7	
4-Bromofluorobenzene (S)	99	%.	84-113	1		08/25/17 04:07	460-00-4	
Toluene-d8 (S)	100	%.	86-111	1		08/25/17 04:07	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning
 Pace Project No.: 50178310

Sample: DUP	Lab ID: 50178310020	Collected: 08/22/17 08:00	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
Acetone	ND	ug/L	100	1		08/25/17 04:39	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 04:39	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 04:39	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 04:39	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 04:39	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 04:39	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 04:39	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 04:39	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 04:39	74-83-9	
Bromomethane	ND	ug/L	5.0	1		08/25/17 04:39	78-93-3	
2-Butanone (MEK)	ND	ug/L	25.0	1		08/25/17 04:39	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:39	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 04:39	98-06-6	
tert-Butylbenzene	ND	ug/L	10.0	1		08/25/17 04:39	75-15-0	
Carbon disulfide	ND	ug/L	5.0	1		08/25/17 04:39	56-23-5	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 04:39	108-90-7	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 04:39	75-00-3	
Chloroethane	ND	ug/L	5.0	1		08/25/17 04:39	67-66-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 04:39	74-87-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 04:39	95-49-8	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 04:39	106-43-4	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 04:39	124-48-1	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 04:39	106-93-4	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 04:39	74-95-3	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 04:39	541-73-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:39	106-46-7	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:39	110-57-6	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:39	75-34-3	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 04:39	107-06-2	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 04:39	156-59-2	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 04:39	156-60-5	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 04:39	78-87-5	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:39	142-28-9	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:39	594-20-7	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 04:39	563-58-6	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:39	10061-01-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:39	10061-02-6	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 04:39	100-41-4	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:39	97-63-2	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:39	87-68-3	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 04:39	110-54-3	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 04:39	591-78-6	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 04:39	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 04:39	98-82-8	
n-Hexane	ND	ug/L	5.0	1		08/25/17 04:39	100-41-4	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 04:39	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 04:39	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 04:39	135-98-8	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: DUP	Lab ID: 50178310020	Collected: 08/22/17 08:00	Received: 08/23/17 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 04:39	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 04:39	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 04:39	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 04:39	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 04:39	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 04:39	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 04:39	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 04:39	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 04:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 04:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 04:39	79-34-5	
Tetrachloroethene	119	ug/L	5.0	1		08/25/17 04:39	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 04:39	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:39	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 04:39	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 04:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 04:39	79-00-5	
Trichloroethene	236	ug/L	5.0	1		08/25/17 04:39	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 04:39	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 04:39	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 04:39	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 04:39	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 04:39	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 04:39	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 04:39	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	86-116	1		08/25/17 04:39	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	84-113	1		08/25/17 04:39	460-00-4	
Toluene-d8 (S)	100	%.	86-111	1		08/25/17 04:39	2037-26-5	

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 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: TRIP BLANK Lab ID: **50178310021** Collected: 08/22/17 08:00 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana		Analytical Method: EPA 8260						
Acetone	ND	ug/L	100	1		08/25/17 05:11	67-64-1	
Acrolein	ND	ug/L	50.0	1		08/25/17 05:11	107-02-8	
Acrylonitrile	ND	ug/L	100	1		08/25/17 05:11	107-13-1	
Benzene	ND	ug/L	5.0	1		08/25/17 05:11	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		08/25/17 05:11	108-86-1	
Bromoform	ND	ug/L	5.0	1		08/25/17 05:11	74-97-5	
Bromochloromethane	ND	ug/L	5.0	1		08/25/17 05:11	75-27-4	
Bromodichloromethane	ND	ug/L	5.0	1		08/25/17 05:11	75-25-2	
Bromoform	ND	ug/L	5.0	1		08/25/17 05:11	74-83-9	
Bromomethane	ND	ug/L	25.0	1		08/25/17 05:11	78-93-3	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/25/17 05:11	104-51-8	
n-Butylbenzene	ND	ug/L	5.0	1		08/25/17 05:11	135-98-8	
sec-Butylbenzene	ND	ug/L	5.0	1		08/25/17 05:11	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		08/25/17 05:11	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		08/25/17 05:11	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		08/25/17 05:11	108-90-7	
Chloroethane	ND	ug/L	5.0	1		08/25/17 05:11	75-00-3	
Chloroform	ND	ug/L	5.0	1		08/25/17 05:11	67-66-3	
Chloromethane	ND	ug/L	5.0	1		08/25/17 05:11	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 05:11	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		08/25/17 05:11	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		08/25/17 05:11	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		08/25/17 05:11	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		08/25/17 05:11	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:11	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:11	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:11	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		08/25/17 05:11	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		08/25/17 05:11	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		08/25/17 05:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		08/25/17 05:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		08/25/17 05:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 05:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		08/25/17 05:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 05:11	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		08/25/17 05:11	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		08/25/17 05:11	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		08/25/17 05:11	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 05:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		08/25/17 05:11	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		08/25/17 05:11	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		08/25/17 05:11	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		08/25/17 05:11	87-68-3	
n-Hexane	ND	ug/L	5.0	1		08/25/17 05:11	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		08/25/17 05:11	591-78-6	
Iodomethane	ND	ug/L	10.0	1		08/25/17 05:11	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		08/25/17 05:11	98-82-8	

REPORT OF LABORATORY ANALYSIS

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 (317)228-3100

ANALYTICAL RESULTS

Project: Houghland Canning

Pace Project No.: 50178310

Sample: TRIP BLANK Lab ID: **50178310021** Collected: 08/22/17 08:00 Received: 08/23/17 09:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Indiana	Analytical Method: EPA 8260							
p-Isopropyltoluene	ND	ug/L	5.0	1		08/25/17 05:11	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		08/25/17 05:11	75-09-2	
1-Methylnaphthalene	ND	ug/L	5.0	1		08/25/17 05:11	90-12-0	N2
2-Methylnaphthalene	ND	ug/L	10.0	1		08/25/17 05:11	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		08/25/17 05:11	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		08/25/17 05:11	1634-04-4	
Naphthalene	ND	ug/L	1.7	1		08/25/17 05:11	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		08/25/17 05:11	103-65-1	
Styrene	ND	ug/L	5.0	1		08/25/17 05:11	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 05:11	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		08/25/17 05:11	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		08/25/17 05:11	127-18-4	
Toluene	ND	ug/L	5.0	1		08/25/17 05:11	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:11	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		08/25/17 05:11	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		08/25/17 05:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		08/25/17 05:11	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		08/25/17 05:11	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		08/25/17 05:11	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		08/25/17 05:11	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 05:11	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		08/25/17 05:11	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		08/25/17 05:11	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		08/25/17 05:11	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		08/25/17 05:11	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	95	%.	86-116	1		08/25/17 05:11	1868-53-7	
4-Bromofluorobenzene (S)	100	%.	84-113	1		08/25/17 05:11	460-00-4	
Toluene-d8 (S)	101	%.	86-111	1		08/25/17 05:11	2037-26-5	

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning

Pace Project No.: 50178310

QC Batch: 402892 Analysis Method: EPA 8260

QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Associated Lab Samples: 50178310001, 50178310002, 50178310003, 50178310004, 50178310005, 50178310006, 50178310007,
 50178310008, 50178310009, 50178310010, 50178310011

METHOD BLANK: 1854269

Matrix: Water

Associated Lab Samples: 50178310001, 50178310002, 50178310003, 50178310004, 50178310005, 50178310006, 50178310007,
 50178310008, 50178310009, 50178310010, 50178310011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	08/24/17 23:36	
1,1,1-Trichloroethane	ug/L	ND	5.0	08/24/17 23:36	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	08/24/17 23:36	
1,1,2-Trichloroethane	ug/L	ND	5.0	08/24/17 23:36	
1,1-Dichloroethane	ug/L	ND	5.0	08/24/17 23:36	
1,1-Dichloroethene	ug/L	ND	5.0	08/24/17 23:36	
1,1-Dichloropropene	ug/L	ND	5.0	08/24/17 23:36	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	08/24/17 23:36	
1,2,3-Trichloropropane	ug/L	ND	5.0	08/24/17 23:36	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	08/24/17 23:36	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	08/24/17 23:36	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	08/24/17 23:36	
1,2-Dichlorobenzene	ug/L	ND	5.0	08/24/17 23:36	
1,2-Dichloroethane	ug/L	ND	5.0	08/24/17 23:36	
1,2-Dichloropropane	ug/L	ND	5.0	08/24/17 23:36	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	08/24/17 23:36	
1,3-Dichlorobenzene	ug/L	ND	5.0	08/24/17 23:36	
1,3-Dichloropropane	ug/L	ND	5.0	08/24/17 23:36	
1,4-Dichlorobenzene	ug/L	ND	5.0	08/24/17 23:36	
1-Methylnaphthalene	ug/L	ND	5.0	08/24/17 23:36	N2
2,2-Dichloropropane	ug/L	ND	5.0	08/24/17 23:36	
2-Butanone (MEK)	ug/L	ND	25.0	08/24/17 23:36	
2-Chlorotoluene	ug/L	ND	5.0	08/24/17 23:36	
2-Hexanone	ug/L	ND	25.0	08/24/17 23:36	
2-Methylnaphthalene	ug/L	ND	10.0	08/24/17 23:36	
4-Chlorotoluene	ug/L	ND	5.0	08/24/17 23:36	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	08/24/17 23:36	
Acetone	ug/L	ND	100	08/24/17 23:36	
Acrolein	ug/L	ND	50.0	08/24/17 23:36	
Acrylonitrile	ug/L	ND	100	08/24/17 23:36	
Benzene	ug/L	ND	5.0	08/24/17 23:36	
Bromobenzene	ug/L	ND	5.0	08/24/17 23:36	
Bromochloromethane	ug/L	ND	5.0	08/24/17 23:36	
Bromodichloromethane	ug/L	ND	5.0	08/24/17 23:36	
Bromoform	ug/L	ND	5.0	08/24/17 23:36	
Bromomethane	ug/L	ND	5.0	08/24/17 23:36	
Carbon disulfide	ug/L	ND	10.0	08/24/17 23:36	
Carbon tetrachloride	ug/L	ND	5.0	08/24/17 23:36	
Chlorobenzene	ug/L	ND	5.0	08/24/17 23:36	
Chloroethane	ug/L	ND	5.0	08/24/17 23:36	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: Houghland Canning
 Pace Project No.: 50178310

METHOD BLANK: 1854269 Matrix: Water
 Associated Lab Samples: 50178310001, 50178310002, 50178310003, 50178310004, 50178310005, 50178310006, 50178310007,
 50178310008, 50178310009, 50178310010, 50178310011

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
Chloroform	ug/L	ND	5.0	08/24/17 23:36	
Chloromethane	ug/L	ND	5.0	08/24/17 23:36	
cis-1,2-Dichloroethene	ug/L	ND	5.0	08/24/17 23:36	
cis-1,3-Dichloropropene	ug/L	ND	5.0	08/24/17 23:36	
Dibromochloromethane	ug/L	ND	5.0	08/24/17 23:36	
Dibromomethane	ug/L	ND	5.0	08/24/17 23:36	
Dichlorodifluoromethane	ug/L	ND	5.0	08/24/17 23:36	
Ethyl methacrylate	ug/L	ND	100	08/24/17 23:36	
Ethylbenzene	ug/L	ND	5.0	08/24/17 23:36	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	08/24/17 23:36	
Iodomethane	ug/L	ND	10.0	08/24/17 23:36	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	08/24/17 23:36	
Methyl-tert-butyl ether	ug/L	ND	4.0	08/24/17 23:36	
Methylene Chloride	ug/L	ND	5.0	08/24/17 23:36	
n-Butylbenzene	ug/L	ND	5.0	08/24/17 23:36	
n-Hexane	ug/L	ND	5.0	08/24/17 23:36	
n-Propylbenzene	ug/L	ND	5.0	08/24/17 23:36	
Naphthalene	ug/L	ND	1.7	08/24/17 23:36	
p-Isopropyltoluene	ug/L	ND	5.0	08/24/17 23:36	
sec-Butylbenzene	ug/L	ND	5.0	08/24/17 23:36	
Styrene	ug/L	ND	5.0	08/24/17 23:36	
tert-Butylbenzene	ug/L	ND	5.0	08/24/17 23:36	
Tetrachloroethene	ug/L	ND	5.0	08/24/17 23:36	
Toluene	ug/L	ND	5.0	08/24/17 23:36	
trans-1,2-Dichloroethene	ug/L	ND	5.0	08/24/17 23:36	
trans-1,3-Dichloropropene	ug/L	ND	5.0	08/24/17 23:36	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	08/24/17 23:36	
Trichloroethene	ug/L	ND	5.0	08/24/17 23:36	
Trichlorofluoromethane	ug/L	ND	5.0	08/24/17 23:36	
Vinyl acetate	ug/L	ND	50.0	08/24/17 23:36	
Vinyl chloride	ug/L	ND	2.0	08/24/17 23:36	
Xylene (Total)	ug/L	ND	10.0	08/24/17 23:36	
4-Bromofluorobenzene (S)	%.	101	84-113	08/24/17 23:36	
Dibromofluoromethane (S)	%.	97	86-116	08/24/17 23:36	
Toluene-d8 (S)	%.	98	86-111	08/24/17 23:36	

LABORATORY CONTROL SAMPLE: 1854270

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
1,1,1,2-Tetrachloroethane	ug/L	50	46.4	93	80-123	
1,1,1-Trichloroethane	ug/L	50	41.2	82	72-126	
1,1,2,2-Tetrachloroethane	ug/L	50	44.0	88	74-124	
1,1,2-Trichloroethane	ug/L	50	43.3	87	79-121	

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning
 Pace Project No.: 50178310

LABORATORY CONTROL SAMPLE: 1854270

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethane	ug/L	50	42.1	84	77-122	
1,1-Dichloroethene	ug/L	50	41.3	83	70-131	
1,1-Dichloropropene	ug/L	50	43.7	87	79-124	
1,2,3-Trichlorobenzene	ug/L	50	42.1	84	70-129	
1,2,3-Trichloropropane	ug/L	50	48.6	97	79-128	
1,2,4-Trichlorobenzene	ug/L	50	41.9	84	69-129	
1,2,4-Trimethylbenzene	ug/L	50	42.7	85	76-125	
1,2-Dibromoethane (EDB)	ug/L	50	45.8	92	81-123	
1,2-Dichlorobenzene	ug/L	50	45.2	90	77-118	
1,2-Dichloroethane	ug/L	50	42.0	84	72-119	
1,2-Dichloropropane	ug/L	50	44.0	88	78-125	
1,3,5-Trimethylbenzene	ug/L	50	43.5	87	79-123	
1,3-Dichlorobenzene	ug/L	50	44.2	88	74-120	
1,3-Dichloropropane	ug/L	50	47.1	94	80-127	
1,4-Dichlorobenzene	ug/L	50	43.5	87	72-118	
1-Methylnaphthalene	ug/L	50	45.1	90	64-134 N2	
2,2-Dichloropropane	ug/L	50	38.7	77	41-145	
2-Butanone (MEK)	ug/L	250	223	89	61-150	
2-Chlorotoluene	ug/L	50	43.3	87	77-119	
2-Hexanone	ug/L	250	236	94	67-141	
2-Methylnaphthalene	ug/L	50	44.2	88	53-112	
4-Chlorotoluene	ug/L	50	45.7	91	75-123	
4-Methyl-2-pentanone (MIBK)	ug/L	250	223	89	71-131	
Acetone	ug/L	250	202	81	39-166	
Acrolein	ug/L	1000	1330	133	22-200	
Acrylonitrile	ug/L	200	175	88	62-130	
Benzene	ug/L	50	44.2	88	79-120	
Bromobenzene	ug/L	50	43.7	87	76-121	
Bromochloromethane	ug/L	50	42.9	86	69-136	
Bromodichloromethane	ug/L	50	43.3	87	76-125	
Bromoform	ug/L	50	46.6	93	69-119	
Bromomethane	ug/L	50	56.9	114	27-161	
Carbon disulfide	ug/L	50	39.4	79	60-130	
Carbon tetrachloride	ug/L	50	41.8	84	74-132	
Chlorobenzene	ug/L	50	45.3	91	77-116	
Chloroethane	ug/L	50	45.0	90	51-132	
Chloroform	ug/L	50	42.8	86	76-118	
Chloromethane	ug/L	50	44.1	88	46-126	
cis-1,2-Dichloroethene	ug/L	50	41.6	83	74-126	
cis-1,3-Dichloropropene	ug/L	50	45.0	90	78-125	
Dibromochloromethane	ug/L	50	45.7	91	80-123	
Dibromomethane	ug/L	50	43.3	87	75-124	
Dichlorodifluoromethane	ug/L	50	50.3	101	42-152	
Ethyl methacrylate	ug/L	200	175	88	75-136	
Ethylbenzene	ug/L	50	42.0	84	80-123	
Hexachloro-1,3-butadiene	ug/L	50	42.3	85	74-127	
Iodomethane	ug/L	100	113	113	43-156	

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning
 Pace Project No.: 50178310

LABORATORY CONTROL SAMPLE: 1854270

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Isopropylbenzene (Cumene)	ug/L	50	45.0	90	80-122	
Methyl-tert-butyl ether	ug/L	50	42.8	86	63-131	
Methylene Chloride	ug/L	50	42.6	85	62-126	
n-Butylbenzene	ug/L	50	40.4	81	75-123	
n-Hexane	ug/L	50	40.2	80	66-129	
n-Propylbenzene	ug/L	50	44.6	89	79-128	
Naphthalene	ug/L	50	40.7	81	66-130	
p-Isopropyltoluene	ug/L	50	42.2	84	79-124	
sec-Butylbenzene	ug/L	50	44.5	89	80-126	
Styrene	ug/L	50	40.5	81	81-125	
tert-Butylbenzene	ug/L	50	34.2	68	62-106	
Tetrachloroethene	ug/L	50	42.9	86	74-119	
Toluene	ug/L	50	44.0	88	77-117	
trans-1,2-Dichloroethene	ug/L	50	42.3	85	74-128	
trans-1,3-Dichloropropene	ug/L	50	44.3	89	75-132	
trans-1,4-Dichloro-2-butene	ug/L	200	165	82	42-134	
Trichloroethene	ug/L	50	42.7	85	75-119	
Trichlorofluoromethane	ug/L	50	48.2	96	57-152	
Vinyl acetate	ug/L	200	194	97	71-148	
Vinyl chloride	ug/L	50	48.7	97	62-137	
Xylene (Total)	ug/L	150	129	86	79-121	
4-Bromofluorobenzene (S)	%			100	84-113	
Dibromofluoromethane (S)	%			93	86-116	
Toluene-d8 (S)	%			99	86-111	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1854271 1854272

Parameter	Units	MS		MSD		MS	MSD	MS	MSD	% Rec	Max	RPD	RPD	Qual
		50178310003	Result	Spike Conc.	Spike Conc.									
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	46.0	46.5	92	93	48-143	1	20			
1,1,1-Trichloroethane	ug/L	ND	50	50	41.4	40.4	83	81	52-142	3	20			
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	47.0	46.1	94	92	48-143	2	20			
1,1,2-Trichloroethane	ug/L	ND	50	50	44.2	44.3	88	89	51-139	0	20			
1,1-Dichloroethane	ug/L	ND	50	50	42.1	41.3	84	83	53-139	2	20			
1,1-Dichloroethene	ug/L	ND	50	50	40.9	40.5	82	81	50-149	1	20			
1,1-Dichloropropene	ug/L	ND	50	50	42.7	42.2	85	84	52-145	1	20			
1,2,3-Trichlorobenzene	ug/L	ND	50	50	40.4	41.7	81	83	30-144	3	20			
1,2,3-Trichloropropane	ug/L	ND	50	50	50.7	51.6	101	103	49-149	2	20			
1,2,4-Trichlorobenzene	ug/L	ND	50	50	40.1	40.1	80	80	24-146	0	20			
1,2,4-Trimethylbenzene	ug/L	ND	50	50	39.5	37.0	79	74	33-150	7	20			
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	47.8	47.5	96	95	54-141	1	20			
1,2-Dichlorobenzene	ug/L	ND	50	50	44.5	44.5	89	89	33-142	0	20			
1,2-Dichloroethane	ug/L	ND	50	50	43.1	43.0	86	86	47-138	0	20			
1,2-Dichloropropane	ug/L	ND	50	50	44.5	44.1	89	88	55-142	1	20			
1,3,5-Trimethylbenzene	ug/L	ND	50	50	38.5	34.0	77	68	31-150	12	20			

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning
 Pace Project No.: 50178310

Parameter	Units	50178310003		1854271		1854272		% Rec	Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	MS Spike Conc.	MS Result	MSD Result	% Rec					
1,3-Dichlorobenzene	ug/L	ND	50	50	43.6	43.1	87	86	27-145	1	20	
1,3-Dichloropropane	ug/L	ND	50	50	47.9	48.5	96	97	55-145	1	20	
1,4-Dichlorobenzene	ug/L	ND	50	50	43.1	43.1	86	86	27-140	0	20	
1-Methylnaphthalene	ug/L	ND	50	50	45.3	47.4	91	95	40-143	5	20	N2
2,2-Dichloropropane	ug/L	ND	50	50	38.1	37.7	76	75	23-144	1	20	
2-Butanone (MEK)	ug/L	ND	250	250	243	245	97	98	39-159	0	20	
2-Chlorotoluene	ug/L	ND	50	50	42.5	41.1	85	82	31-148	3	20	
2-Hexanone	ug/L	ND	250	250	253	256	101	102	47-151	1	20	
2-Methylnaphthalene	ug/L	ND	50	50	42.7	44.3	85	89	27-123	4	20	
4-Chlorotoluene	ug/L	ND	50	50	45.7	43.7	91	87	30-148	4	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	239	244	96	98	48-146	2	20	
Acetone	ug/L	ND	250	250	259	257	104	103	31-152	1	20	
Acrolein	ug/L	ND	1000	1000	1040	1020	104	102	23-200	2	20	
Acrylonitrile	ug/L	ND	200	200	187	184	93	92	42-143	2	20	
Benzene	ug/L	ND	50	50	43.7	44.0	87	88	57-136	1	20	
Bromobenzene	ug/L	ND	50	50	44.8	43.8	90	88	45-138	2	20	
Bromoform	ug/L	ND	50	50	44.2	43.7	88	87	50-145	1	20	
Bromodichloromethane	ug/L	ND	50	50	43.1	43.5	86	87	49-142	1	20	
Bromoform	ug/L	ND	50	50	48.3	46.2	97	92	39-131	4	20	
Bromomethane	ug/L	ND	50	50	54.6	55.3	109	111	10-162	1	20	
Carbon disulfide	ug/L	ND	50	50	38.7	38.1	77	76	34-142	1	20	
Carbon tetrachloride	ug/L	ND	50	50	42.0	41.3	84	83	47-150	2	20	
Chlorobenzene	ug/L	ND	50	50	44.5	44.3	89	89	42-138	1	20	
Chloroethane	ug/L	ND	50	50	43.4	44.1	87	88	34-148	2	20	
Chloroform	ug/L	ND	50	50	42.9	42.1	86	84	54-136	2	20	
Chloromethane	ug/L	ND	50	50	43.8	44.1	88	88	27-138	1	20	
cis-1,2-Dichloroethene	ug/L	ND	50	50	41.5	40.4	83	81	48-147	3	20	
cis-1,3-Dichloropropene	ug/L	ND	50	50	44.0	44.6	88	89	40-142	1	20	
Dibromochloromethane	ug/L	ND	50	50	47.1	47.0	94	94	46-143	0	20	
Dibromomethane	ug/L	ND	50	50	46.6	45.1	93	90	53-140	3	20	
Dichlorodifluoromethane	ug/L	ND	50	50	51.2	49.1	102	98	23-169	4	20	
Ethyl methacrylate	ug/L	ND	200	200	181	181	90	91	54-149	0	20	
Ethylbenzene	ug/L	ND	50	50	40.6	40.0	81	79	40-147	2	20	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	40.4	40.8	81	82	19-156	1	20	
Iodomethane	ug/L	ND	100	100	110	110	110	110	13-136	0	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	43.3	43.1	87	86	37-151	0	20	
Methyl-tert-butyl ether	ug/L	ND	50	50	45.3	45.3	91	91	46-147	0	20	
Methylene Chloride	ug/L	ND	50	50	41.7	41.3	83	83	40-138	1	20	
n-Butylbenzene	ug/L	ND	50	50	38.4	37.8	77	76	21-155	2	20	
n-Hexane	ug/L	ND	50	50	38.9	38.6	78	77	50-137	1	20	
n-Propylbenzene	ug/L	ND	50	50	43.4	41.5	87	83	29-158	4	20	
Naphthalene	ug/L	ND	50	50	41.0	42.5	82	85	43-139	4	20	
p-Isopropyltoluene	ug/L	ND	50	50	40.2	39.2	80	78	25-156	3	20	
sec-Butylbenzene	ug/L	ND	50	50	42.5	41.3	85	83	27-159	3	20	
Styrene	ug/L	ND	50	50	37.2	33.5	74	67	34-149	10	20	

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REPORT OF LABORATORY ANALYSIS

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 7726 Moller Road
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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning
 Pace Project No.: 50178310

Parameter	Units	50178310003		1854271		1854272		% Rec	Limits	RPD	Max RPD	Qual
		MS Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
tert-Butylbenzene	ug/L	ND	50	50	33.8	33.0	68	66	25-128	2	20	
Tetrachloroethene	ug/L	ND	50	50	42.5	42.1	85	84	37-144	1	20	
Toluene	ug/L	ND	50	50	42.3	42.2	85	84	46-137	0	20	
trans-1,2-Dichloroethene	ug/L	ND	50	50	42.1	41.9	84	84	51-145	1	20	
trans-1,3-Dichloropropene	ug/L	ND	50	50	45.6	45.6	91	91	41-143	0	20	
trans-1,4-Dichloro-2-butene	ug/L	ND	200	200	170	171	85	85	10-145	0	20	
Trichloroethene	ug/L	ND	50	50	43.9	43.5	85	84	45-139	1	20	
Trichlorofluoromethane	ug/L	ND	50	50	49.5	48.6	99	97	42-164	2	20	
Vinyl acetate	ug/L	ND	200	200	150	146	75	73	10-149	3	20	
Vinyl chloride	ug/L	ND	50	50	48.6	47.0	97	94	43-154	3	20	
Xylene (Total)	ug/L	ND	150	150	123	119	82	80	37-146	3	20	
4-Bromofluorobenzene (S)	%						99	102	84-113			
Dibromofluoromethane (S)	%						95	94	86-116			
Toluene-d8 (S)	%						97	98	86-111			

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QUALITY CONTROL DATA

Project: Houghland Canning

Pace Project No.: 50178310

QC Batch: 402893 Analysis Method: EPA 8260

QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Associated Lab Samples: 50178310012, 50178310013, 50178310014, 50178310015, 50178310016, 50178310017, 50178310018,
 50178310019, 50178310020, 50178310021

METHOD BLANK: 1854273

Matrix: Water

Associated Lab Samples: 50178310012, 50178310013, 50178310014, 50178310015, 50178310016, 50178310017, 50178310018,
 50178310019, 50178310020, 50178310021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	08/24/17 23:52	
1,1,1-Trichloroethane	ug/L	ND	5.0	08/24/17 23:52	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	08/24/17 23:52	
1,1,2-Trichloroethane	ug/L	ND	5.0	08/24/17 23:52	
1,1-Dichloroethane	ug/L	ND	5.0	08/24/17 23:52	
1,1-Dichloroethene	ug/L	ND	5.0	08/24/17 23:52	
1,1-Dichloropropene	ug/L	ND	5.0	08/24/17 23:52	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	08/24/17 23:52	
1,2,3-Trichloropropane	ug/L	ND	5.0	08/24/17 23:52	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	08/24/17 23:52	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	08/24/17 23:52	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	08/24/17 23:52	
1,2-Dichlorobenzene	ug/L	ND	5.0	08/24/17 23:52	
1,2-Dichloroethane	ug/L	ND	5.0	08/24/17 23:52	
1,2-Dichloropropane	ug/L	ND	5.0	08/24/17 23:52	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	08/24/17 23:52	
1,3-Dichlorobenzene	ug/L	ND	5.0	08/24/17 23:52	
1,3-Dichloropropane	ug/L	ND	5.0	08/24/17 23:52	
1,4-Dichlorobenzene	ug/L	ND	5.0	08/24/17 23:52	
1-Methylnaphthalene	ug/L	ND	5.0	08/24/17 23:52	N2
2,2-Dichloropropane	ug/L	ND	5.0	08/24/17 23:52	
2-Butanone (MEK)	ug/L	ND	25.0	08/24/17 23:52	
2-Chlorotoluene	ug/L	ND	5.0	08/24/17 23:52	
2-Hexanone	ug/L	ND	25.0	08/24/17 23:52	
2-Methylnaphthalene	ug/L	ND	10.0	08/24/17 23:52	
4-Chlorotoluene	ug/L	ND	5.0	08/24/17 23:52	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	08/24/17 23:52	
Acetone	ug/L	ND	100	08/24/17 23:52	
Acrolein	ug/L	ND	50.0	08/24/17 23:52	
Acrylonitrile	ug/L	ND	100	08/24/17 23:52	
Benzene	ug/L	ND	5.0	08/24/17 23:52	
Bromobenzene	ug/L	ND	5.0	08/24/17 23:52	
Bromochloromethane	ug/L	ND	5.0	08/24/17 23:52	
Bromodichloromethane	ug/L	ND	5.0	08/24/17 23:52	
Bromoform	ug/L	ND	5.0	08/24/17 23:52	
Bromomethane	ug/L	ND	5.0	08/24/17 23:52	
Carbon disulfide	ug/L	ND	10.0	08/24/17 23:52	
Carbon tetrachloride	ug/L	ND	5.0	08/24/17 23:52	
Chlorobenzene	ug/L	ND	5.0	08/24/17 23:52	
Chloroethane	ug/L	ND	5.0	08/24/17 23:52	

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 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning
 Pace Project No.: 50178310

METHOD BLANK: 1854273 Matrix: Water
 Associated Lab Samples: 50178310012, 50178310013, 50178310014, 50178310015, 50178310016, 50178310017, 50178310018,
 50178310019, 50178310020, 50178310021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	08/24/17 23:52	
Chloromethane	ug/L	ND	5.0	08/24/17 23:52	
cis-1,2-Dichloroethene	ug/L	ND	5.0	08/24/17 23:52	
cis-1,3-Dichloropropene	ug/L	ND	5.0	08/24/17 23:52	
Dibromochloromethane	ug/L	ND	5.0	08/24/17 23:52	
Dibromomethane	ug/L	ND	5.0	08/24/17 23:52	
Dichlorodifluoromethane	ug/L	ND	5.0	08/24/17 23:52	
Ethyl methacrylate	ug/L	ND	100	08/24/17 23:52	
Ethylbenzene	ug/L	ND	5.0	08/24/17 23:52	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	08/24/17 23:52	
Iodomethane	ug/L	ND	10.0	08/24/17 23:52	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	08/24/17 23:52	
Methyl-tert-butyl ether	ug/L	ND	4.0	08/24/17 23:52	
Methylene Chloride	ug/L	ND	5.0	08/24/17 23:52	
n-Butylbenzene	ug/L	ND	5.0	08/24/17 23:52	
n-Hexane	ug/L	ND	5.0	08/24/17 23:52	
n-Propylbenzene	ug/L	ND	5.0	08/24/17 23:52	
Naphthalene	ug/L	ND	1.7	08/24/17 23:52	
p-Isopropyltoluene	ug/L	ND	5.0	08/24/17 23:52	
sec-Butylbenzene	ug/L	ND	5.0	08/24/17 23:52	
Styrene	ug/L	ND	5.0	08/24/17 23:52	
tert-Butylbenzene	ug/L	ND	5.0	08/24/17 23:52	
Tetrachloroethene	ug/L	ND	5.0	08/24/17 23:52	
Toluene	ug/L	ND	5.0	08/24/17 23:52	
trans-1,2-Dichloroethene	ug/L	ND	5.0	08/24/17 23:52	
trans-1,3-Dichloropropene	ug/L	ND	5.0	08/24/17 23:52	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	08/24/17 23:52	
Trichloroethene	ug/L	ND	5.0	08/24/17 23:52	
Trichlorofluoromethane	ug/L	ND	5.0	08/24/17 23:52	
Vinyl acetate	ug/L	ND	50.0	08/24/17 23:52	
Vinyl chloride	ug/L	ND	2.0	08/24/17 23:52	
Xylene (Total)	ug/L	ND	10.0	08/24/17 23:52	
4-Bromofluorobenzene (S)	%.	97	84-113	08/24/17 23:52	
Dibromofluoromethane (S)	%.	96	86-116	08/24/17 23:52	
Toluene-d8 (S)	%.	102	86-111	08/24/17 23:52	

LABORATORY CONTROL SAMPLE: 1854274

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	47.0	94	80-123	
1,1,1-Trichloroethane	ug/L	50	40.8	82	72-126	
1,1,2,2-Tetrachloroethane	ug/L	50	43.2	86	74-124	
1,1,2-Trichloroethane	ug/L	50	42.4	85	79-121	

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning
 Pace Project No.: 50178310

LABORATORY CONTROL SAMPLE: 1854274

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethane	ug/L	50	42.1	84	77-122	
1,1-Dichloroethene	ug/L	50	43.0	86	70-131	
1,1-Dichloropropene	ug/L	50	43.0	86	79-124	
1,2,3-Trichlorobenzene	ug/L	50	43.5	87	70-129	
1,2,3-Trichloropropane	ug/L	50	48.2	96	79-128	
1,2,4-Trichlorobenzene	ug/L	50	41.6	83	69-129	
1,2,4-Trimethylbenzene	ug/L	50	40.9	82	76-125	
1,2-Dibromoethane (EDB)	ug/L	50	47.1	94	81-123	
1,2-Dichlorobenzene	ug/L	50	45.4	91	77-118	
1,2-Dichloroethane	ug/L	50	42.0	84	72-119	
1,2-Dichloropropane	ug/L	50	44.7	89	78-125	
1,3,5-Trimethylbenzene	ug/L	50	41.5	83	79-123	
1,3-Dichlorobenzene	ug/L	50	42.8	86	74-120	
1,3-Dichloropropane	ug/L	50	49.4	99	80-127	
1,4-Dichlorobenzene	ug/L	50	41.8	84	72-118	
1-Methylnaphthalene	ug/L	50	48.6	97	64-134 N2	
2,2-Dichloropropane	ug/L	50	40.8	82	41-145	
2-Butanone (MEK)	ug/L	250	251	100	61-150	
2-Chlorotoluene	ug/L	50	40.9	82	77-119	
2-Hexanone	ug/L	250	251	100	67-141	
2-Methylnaphthalene	ug/L	50	46.3	93	53-112	
4-Chlorotoluene	ug/L	50	42.7	85	75-123	
4-Methyl-2-pentanone (MIBK)	ug/L	250	241	96	71-131	
Acetone	ug/L	250	211	84	39-166	
Acrolein	ug/L	1000	1250	125	22-200	
Acrylonitrile	ug/L	200	176	88	62-130	
Benzene	ug/L	50	44.9	90	79-120	
Bromobenzene	ug/L	50	43.8	88	76-121	
Bromochloromethane	ug/L	50	45.7	91	69-136	
Bromodichloromethane	ug/L	50	43.4	87	76-125	
Bromoform	ug/L	50	45.9	92	69-119	
Bromomethane	ug/L	50	45.2	90	27-161	
Carbon disulfide	ug/L	50	41.3	83	60-130	
Carbon tetrachloride	ug/L	50	43.3	87	74-132	
Chlorobenzene	ug/L	50	44.8	90	77-116	
Chloroethane	ug/L	50	40.8	82	51-132	
Chloroform	ug/L	50	41.7	83	76-118	
Chloromethane	ug/L	50	44.9	90	46-126	
cis-1,2-Dichloroethene	ug/L	50	41.2	82	74-126	
cis-1,3-Dichloropropene	ug/L	50	47.4	95	78-125	
Dibromochloromethane	ug/L	50	47.0	94	80-123	
Dibromomethane	ug/L	50	45.5	91	75-124	
Dichlorodifluoromethane	ug/L	50	48.6	97	42-152	
Ethyl methacrylate	ug/L	200	186	93	75-136	
Ethylbenzene	ug/L	50	41.1	82	80-123	
Hexachloro-1,3-butadiene	ug/L	50	43.4	87	74-127	
Iodomethane	ug/L	100	93.6	94	43-156	

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REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning
 Pace Project No.: 50178310

LABORATORY CONTROL SAMPLE: 1854274

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Isopropylbenzene (Cumene)	ug/L	50	44.0	88	80-122	
Methyl-tert-butyl ether	ug/L	50	42.9	86	63-131	
Methylene Chloride	ug/L	50	51.3	103	62-126	
n-Butylbenzene	ug/L	50	39.5	79	75-123	
n-Hexane	ug/L	50	41.8	84	66-129	
n-Propylbenzene	ug/L	50	41.7	83	79-128	
Naphthalene	ug/L	50	43.1	86	66-130	
p-Isopropyltoluene	ug/L	50	41.1	82	79-124	
sec-Butylbenzene	ug/L	50	41.7	83	80-126	
Styrene	ug/L	50	41.3	83	81-125	
tert-Butylbenzene	ug/L	50	34.8	70	62-106	
Tetrachloroethene	ug/L	50	44.9	90	74-119	
Toluene	ug/L	50	43.6	87	77-117	
trans-1,2-Dichloroethene	ug/L	50	42.8	86	74-128	
trans-1,3-Dichloropropene	ug/L	50	47.2	94	75-132	
trans-1,4-Dichloro-2-butene	ug/L	200	163	82	42-134	
Trichloroethene	ug/L	50	42.5	85	75-119	
Trichlorofluoromethane	ug/L	50	45.6	91	57-152	
Vinyl acetate	ug/L	200	189	94	71-148	
Vinyl chloride	ug/L	50	45.3	91	62-137	
Xylene (Total)	ug/L	150	126	84	79-121	
4-Bromofluorobenzene (S)	%			99	84-113	
Dibromofluoromethane (S)	%			93	86-116	
Toluene-d8 (S)	%			101	86-111	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1854275 1854276

Parameter	Units	MS		MSD		MS	MSD	MS	MSD	% Rec	Max
		50178310019	Result	Spike Conc.	Spike Conc.						
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	49.6	52.0	99	104	48-143	5	20
1,1,1-Trichloroethane	ug/L	ND	50	50	42.6	44.3	85	89	52-142	4	20
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	45.6	48.1	91	96	48-143	6	20
1,1,2-Trichloroethane	ug/L	ND	50	50	44.8	46.3	90	93	51-139	3	20
1,1-Dichloroethane	ug/L	ND	50	50	45.3	46.0	91	92	53-139	2	20
1,1-Dichloroethene	ug/L	ND	50	50	45.4	45.4	91	91	50-149	0	20
1,1-Dichloropropene	ug/L	ND	50	50	44.2	45.1	88	90	52-145	2	20
1,2,3-Trichlorobenzene	ug/L	ND	50	50	42.0	46.0	84	92	30-144	9	20
1,2,3-Trichloropropane	ug/L	ND	50	50	48.0	51.5	96	103	49-149	7	20
1,2,4-Trichlorobenzene	ug/L	ND	50	50	40.4	42.1	81	84	24-146	4	20
1,2,4-Trimethylbenzene	ug/L	ND	50	50	41.6	43.4	83	87	33-150	4	20
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	49.9	53.4	100	107	54-141	7	20
1,2-Dichlorobenzene	ug/L	ND	50	50	47.0	49.4	94	99	33-142	5	20
1,2-Dichloroethane	ug/L	ND	50	50	46.2	48.3	92	97	47-138	4	20
1,2-Dichloropropane	ug/L	ND	50	50	47.2	49.0	94	98	55-142	4	20
1,3,5-Trimethylbenzene	ug/L	ND	50	50	41.8	43.9	84	88	31-150	5	20

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REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, LLC
 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning
 Pace Project No.: 50178310

Parameter	Units	50178310019		1854275		1854276		% Rec	Limits	RPD	Max RPD	Qual
		MS Spike Result	Conc.	MS Spike Result	Conc.	MS Result	MSD % Rec					
1,3-Dichlorobenzene	ug/L	ND	50	50	44.2	46.1	88	92	27-145	4	20	
1,3-Dichloropropane	ug/L	ND	50	50	52.5	54.5	105	109	55-145	4	20	
1,4-Dichlorobenzene	ug/L	ND	50	50	42.5	44.5	85	89	27-140	5	20	
1-Methylnaphthalene	ug/L	ND	50	50	46.1	52.4	92	105	40-143	13	20	N2
2,2-Dichloropropane	ug/L	ND	50	50	42.9	44.2	86	88	23-144	3	20	
2-Butanone (MEK)	ug/L	ND	250	250	280	291	112	116	39-159	4	20	
2-Chlorotoluene	ug/L	ND	50	50	41.9	43.7	84	87	31-148	4	20	
2-Hexanone	ug/L	ND	250	250	268	291	107	116	47-151	8	20	
2-Methylnaphthalene	ug/L	ND	50	50	41.6	48.9	83	98	27-123	16	20	
4-Chlorotoluene	ug/L	ND	50	50	45.2	47.0	90	94	30-148	4	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	254	278	101	111	48-146	9	20	
Acetone	ug/L	ND	250	250	231	252	92	101	31-152	9	20	
Acrolein	ug/L	ND	1000	1000	1070	1110	107	111	23-200	4	20	
Acrylonitrile	ug/L	ND	200	200	190	206	95	103	42-143	8	20	
Benzene	ug/L	ND	50	50	47.1	48.9	94	98	57-136	4	20	
Bromobenzene	ug/L	ND	50	50	45.5	48.7	91	97	45-138	7	20	
Bromoform	ug/L	ND	50	50	49.1	51.6	98	103	50-145	5	20	
Bromochloromethane	ug/L	ND	50	50	46.9	48.4	94	97	49-142	3	20	
Bromodichloromethane	ug/L	ND	50	50	46.7	51.0	93	102	39-131	9	20	
Bromoform	ug/L	ND	50	50	48.2	49.5	96	99	10-162	3	20	
Bromomethane	ug/L	ND	50	50	43.9	45.3	88	91	34-142	3	20	
Carbon disulfide	ug/L	ND	50	50	44.8	47.2	90	94	47-150	5	20	
Carbon tetrachloride	ug/L	ND	50	50	48.0	49.4	96	99	42-138	3	20	
Chlorobenzene	ug/L	ND	50	50	44.5	45.9	89	92	34-148	3	20	
Chloroethane	ug/L	ND	50	50	44.6	46.0	89	92	54-136	3	20	
Chloroform	ug/L	ND	50	50	48.4	49.7	97	99	27-138	3	20	
Chloromethane	ug/L	ND	50	50	62.0	62.0	86	86	48-147	0	20	
cis-1,2-Dichloroethene	ug/L	19.1	50	50	48.7	51.2	97	102	40-142	5	20	
cis-1,3-Dichloropropene	ug/L	ND	50	50	50.7	53.8	101	108	46-143	6	20	
Dibromochloromethane	ug/L	ND	50	50	47.8	48.3	96	97	53-140	1	20	
Dibromomethane	ug/L	ND	50	50	51.8	52.9	104	106	23-169	2	20	
Dichlorodifluoromethane	ug/L	ND	50	50	42.7	45.3	85	91	40-147	6	20	
Ethyl methacrylate	ug/L	ND	200	200	199	220	100	110	54-149	10	20	
Ethylbenzene	ug/L	ND	50	50	42.6	43.8	85	88	19-156	3	20	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	105	107	105	107	13-136	2	20	
Iodomethane	ug/L	ND	100	100	45.4	47.2	91	94	37-151	4	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	46.9	49.5	94	99	46-147	5	20	
Methyl-tert-butyl ether	ug/L	ND	50	50	50.5	50.4	101	101	40-138	0	20	
Methylene Chloride	ug/L	ND	50	50	39.4	41.1	79	82	21-155	4	20	
n-Butylbenzene	ug/L	ND	50	50	43.6	45.1	87	90	50-137	3	20	
n-Hexane	ug/L	ND	50	50	42.9	44.6	86	89	29-158	4	20	
n-Propylbenzene	ug/L	ND	50	50	42.8	47.9	86	96	43-139	11	20	
Naphthalene	ug/L	ND	50	50	41.5	43.0	83	86	25-156	3	20	
p-Isopropyltoluene	ug/L	ND	50	50	42.8	45.1	86	90	27-159	5	20	
sec-Butylbenzene	ug/L	ND	50	50	42.0	43.6	84	87	34-149	4	20	
Styrene	ug/L	ND	50	50	42.0	43.6	84	87	34-149	4	20	

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REPORT OF LABORATORY ANALYSIS

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 7726 Moller Road
 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA

Project: Houghland Canning

Pace Project No.: 50178310

Parameter	Units	50178310019		1854275		1854276		% Rec	Limits	RPD	Max RPD	Qual
		MS Result	Spike Conc.	MS Spike Conc.	MSD Result	MSD Result	% Rec					
tert-Butylbenzene	ug/L	ND	50	50	35.2	36.8	70	74	25-128	4	20	
Tetrachloroethene	ug/L	11.0	50	50	57.1	58.6	92	95	37-144	3	20	
Toluene	ug/L	ND	50	50	46.8	47.5	94	95	46-137	1	20	
trans-1,2-Dichloroethene	ug/L	ND	50	50	45.3	47.0	89	92	51-145	4	20	
trans-1,3-Dichloropropene	ug/L	ND	50	50	50.3	52.3	101	105	41-143	4	20	
trans-1,4-Dichloro-2-butene	ug/L	ND	200	200	169	183	85	92	10-145	8	20	
Trichloroethene	ug/L	26.9	50	50	68.4	69.8	83	86	45-139	2	20	
Trichlorofluoromethane	ug/L	ND	50	50	50.4	50.6	101	101	42-164	0	20	
Vinyl acetate	ug/L	ND	200	200	143	150	72	75	10-149	5	20	
Vinyl chloride	ug/L	ND	50	50	49.7	50.0	99	100	43-154	1	20	
Xylene (Total)	ug/L	ND	150	150	130	137	87	91	37-146	5	20	
4-Bromofluorobenzene (S)	%						101	99	84-113			
Dibromofluoromethane (S)	%							97	93	86-116		
Toluene-d8 (S)	%							103	103	86-111		

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 (317)228-3100

QUALIFIERS

Project: Houghland Canning

Pace Project No.: 50178310

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter.

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 Indianapolis, IN 46268
 (317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Houghland Canning
 Pace Project No.: 50178310

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50178310001	MW10	EPA 8260	402892		
50178310002	MW11	EPA 8260	402892		
50178310003	MW12	EPA 8260	402892		
50178310004	MW13	EPA 8260	402892		
50178310005	MW14	EPA 8260	402892		
50178310006	MW15	EPA 8260	402892		
50178310007	MW16	EPA 8260	402892		
50178310008	MW20	EPA 8260	402892		
50178310009	MW21	EPA 8260	402892		
50178310010	MW22	EPA 8260	402892		
50178310011	MW23	EPA 8260	402892		
50178310012	MW24	EPA 8260	402893		
50178310013	MW26	EPA 8260	402893		
50178310014	MW27	EPA 8260	402893		
50178310015	MW28	EPA 8260	402893		
50178310016	MW29	EPA 8260	402893		
50178310017	MW30	EPA 8260	402893		
50178310018	MW31	EPA 8260	402893		
50178310019	MW32	EPA 8260	402893		
50178310020	DUP	EPA 8260	402893		
50178310021	TRIP BLANK	EPA 8260	402893		

REPORT OF LABORATORY ANALYSIS

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

*Face Sealed***Section A
Required Client Information:**

Company: Patriot Indianapolis
Address: 6150 E. 75th St.
Indianapolis, IN 46250
Email: mcsape@patrioteng.com
Phone: 317.576.8058
Requested Due Date: 2024-01-16

**Section B
Required Project Information:**

Report To: Mike Casper
Copy To: James Cody
Purchase Order #: 17-0995-01E
Project Name: Houghland Canning
Project #: 17-OD193-DIE

**Section C
Invoice Information:**

Attention: ap@patrioteng.com
Company Name: Patriot
Address:
Pace Quote:
Pace Project Manager: tina.sayer@pacelabs.com,
Pace Profile #: 1348

ITEM #	SAMPLE ID	COLLECTED		# OF CONTAINERS		SAMPLE TEMP AT COLLECTION	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	Preservatives	Analytes Test	VOC by B280	MS/MSD	IN	Residual Chlorine (Y/N)	Sealed (Y/N)	Samples intact (Y/N)	Received on	TEMP in C
		START	END	DATE	TIME													
1	MW 10	1	8/21	15:00	3										-001			
2	MW 11	1	8/22	10:35	3										-002			
3	MW 12	1	8/23	9:05	9										-003			
4	MW 13	1	8/23	17:40	3										-004			
5	MW 14	1	8/22	14:35	3										-005			
6	MW 15	1	8/22	13:50	3										-006			
7	MW 16	1	8/22	16:00	3										-007			
8	MW 20	1	8/21	13:15	3										-008			
9	MW 21	1	8/21	12:45	3										-009			
10	MW 22	1	8/22	10:45	3										-010			
11	MW 23	1	8/22	16:15	3										-011			
12	MW 24	1	8/22	12:40	3										-012			
Comments: Florida Canning/Melvin 3/23 2024																		
Lever W QC/QC																		
Absolute Recovery																		

SAMPLE NAME AND NUMBER
PRINT Name of SAMPLER: Hendra Crossman
SIGNATURE of SAMPLER: Hendra Crossman
DATE signed: 8/23/17

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Patriot Indianapolis Address: 6150 E. 75th St. Indianapolis, IN 46250 Email: mcasper@patrioteng.com Phone: 317-576-8058		Report To: Mike Casper Copy To: James Cody Purchase Order #: 1740985-01E Project Name: Houghland Canning Project #: ACUW11		Attention: ab@patrioteng.com Company Name: Patriot Address: Pace Quoter: Pace Project Manager: tira.sayer@pacelabs.com, Pace Profile #: 1348	
SAMPLE ID One Character per box. (A-Z, 0-9, -) Sample Ids must be unique.					
ITEM # # OF CONTAINERS MATRIX CODE SAMPLE TYPE (G=GRAB C=COMP) DW Drinking Water WT Water WW Waste Water P Product SubSectid CL Wipe AR Air OT Other TS Tissue					
COLLECTED Preservatives START END					
DATE TIME DATE TIME DATE TIME 1/16 8/20 9:20 3 X 1/21 13:50 3 1/22 11:10 1/23 14:40 1/24 13:55 1/25 16:05 1/26 16:25 1/27 - 1/28 - 1/29 - 1/30 - 1/31 - 1/32 - 1/33 - 1/34 - 1/35 - 1/36 - 1/37 - 1/38 - 1/39 - 1/40 - 1/41 - 1/42 -					
VOC by 8260 Analysis Date 1/13 1/14 1/15 1/16 1/17 1/18 1/19 1/20 1/21					
SAMPLE TEMP AT COLLECTION IN 50178310					
Residual Chlorine (Y/N)					
Received on Temp in C Signature and Signature PRINT Name of SAMPLER: Kendra Grossman SIGNATURE of SAMPLER: Kendra Grossman DATE signed: 8/23/17					
Samples In Custody Sealed (N/A)					
Samples In Inter (NY)					

Sample Condition Upon Receipt*Pace Analytical*Project # 50178310Courier: FedEx UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes noPacking Material: Bubble Wrap Bubble Bags None Other _____Thermometer 1 2 3 4 5 6 A B C D E F Type of Ice: Wet Blue None Samples on ice, cooling process has begunCooler Temperature 3.7/3.1 Ice Visible in Sample Containers: yes no

(Initial/Corrected) Temp should be above freezing to 6°C

Date/Time and Initials of person examining contents: 8-23-17 1232 MTT

Comments

Are samples from West Virginia?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1.						
Document any containers out of temp.								
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.						
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.						
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4.	Date/Time 5035A T/C placed in Freezer: _____ Short Holds Taken to Lab: _____					
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5.						
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.						
Sample Labels match COC: -Includes date/time/ID/Analysis	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.						
All containers needing acid/base pres. have been checked? exceptions: VOA, coliform, O&G	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	(Circle)	HNO3	H ₂ SO4	NaOH	NaOH/ZnAc	
All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.								
Residual Chlorine Check (SVOC 625 Pest/PCB 608)		9.	Present	Absent				
Residual Chlorine Check (Total/Amenable/Free Cyanide)		10.	Present	Absent				
Headspace in VOA Vials (>6mm):		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.					
Headspace Wisconsin Sulfide		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.					
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seals	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13.				

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution:

Sample Container Count

Patriot

CLIENT:

COC PAGE 1 of 2SBS
EXK

(16G)

Project# 5017 8310Matrix SW/NAL
Soil/Water/Non-
Aqueous Liquid

Sample Line Item	AG1U	WGFU	AG0U	R	BP2N	BP2S	BP3U	BP3N	BP3S	AG3S	AG1H	BP3B	BP1U	SP5T	AG2U	pH <2	pH >9	pH>12
1	3																	
2	3																	
3	9																	
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

Container Codes

DG9H	40mL HCl amber vial	AG0U	100mL unpreserved amber glass	BP1N	1 liter HNO3 plastic	BP1S	1 liter H2SO4 plastic	BP1U	1 liter HNO3 plastic	BP1T	1 liter H2SO4 amber vial	BP1Z	40mL H2SO4 amber vial	BP2I	40mL Na Thio amber vial	BP2T	40mL Na Thio amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCl amber glass	BP1S	1 liter H2SO4 plastic	BP1T	1 liter unpreserved plastic	BP1Z	1 liter HNO3 plastic	BP2I	1 liter NaOH, Zn, Ac	BP2T	40mL unpreserved amber vial	BP2Z	120mL Coliform Na Thiosulfate	BP3I	40mL unpreserved amber wide
WGFU	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1Z	1 liter unpreserved plastic	BP1Z	1 liter unpreserved plastic	BP1Z	1 liter NaOH, Zn, Ac	BP2Z	500mL NaOH, Asc Acid plastic	BP2Z	40mL unpreserved amber wide	BP2Z	40mL HCl clear vial	BP3Z	40mL Na Thio. clear vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber glass	BP2I	1 liter NaOH, Zn, Ac	BP2I	1 liter NaOH, Zn, Ac	BP2I	500mL NaOH, Asc Acid plastic	BP2Z	500mL NaOH plastic	BP2Z	40mL unpreserved amber wide	BP2Z	40mL HCl clear vial	BP3I	40mL Na Thio. clear vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2T	500mL NaOH plastic	BP2T	500mL NaOH plastic	BP2T	500mL NaOH plastic	BP2Z	500mL NaOH, Zn Ac	BP2Z	40mL unpreserved clear vial	BP2Z	40mL HCl clear vial	BP3Z	40mL Na Thio. clear vial
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2Z	500mL NaOH plastic	BP2Z	500mL NaOH, Zn Ac	BP2Z	500mL NaOH plastic	BP2Z	500mL NaOH, Zn Ac	BP2Z	40mL unpreserved clear vial	BP2Z	40mL HCl clear vial	BP3Z	40mL Na Thio. clear vial
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber glass	BP3I	Air Filter	BP3I	Air Cassette	BP3I	Air Cassette	BP3I	Air Cassette						
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber glass	BP3T	250mL NaOH plastic	BP3T	250mL NaOH, Zn Ac	BP3T	250mL NaOH, Zn Ac	BP3T	250mL NaOH, Zn Ac						
BP3U	250mL unpreserved plastic	BG1H	1 liter HCl clear glass	BP3Z	250mL NaOH, Zn Ac plastic	BP3Z	250mL NaOH, Zn Ac plastic	BP3Z	250mL NaOH, Zn Ac plastic								
BP3S	250mL H2SO4 plastic	BG1S	1 liter H2SO4 clear glass	C	Air Cassettes	VSG	Headspace septa vial & HCL	VSG	Headspace septa vial & HCL								
AG3S	250mL H2SO4 glass amber	BG1T	1 liter Na Thiosulfate clear glass	DG9B	40mL Na Bisulfite amber vial	WGFX	4oz wide jar w/hexane wipe	WGFX	4oz wide jar w/hexane wipe								
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	BP1A	1 liter NaOH, Asc Acid plastic	BP1A	1 liter NaOH, Asc Acid plastic	BP1A	1 liter NaOH, Asc Acid plastic	BP1A	1 liter NaOH, Asc Acid plastic	BP1A	1 liter NaOH, Asc Acid plastic	ZPLC	Ziploc Bag	ZPLC	Ziploc Bag

